Biological Resources Assessment Update

HALE AVENUE EXTENSION PROJECT
MORGAN HILL, SANTA CLARA COUNTY, CALIFORNIA

Prepared For:
David J. Powers & Associates, Inc.
1871 The Alameda, Suite 200
San José, California 95126

Contact:
Demetri Loukas

Prepared By:
WRA, Inc.
2169-G East Francisco Blvd.,
San Rafael, California 94901

Contact:
Amanda McCarthy
mccarthy@wra-ca.com

Leslie Lazarotti
lazarotti@wra-ca.com

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ENVIRONMENTAL CONSULTANTS

2169-G East Francisco Blvd., San Rafael, CA 94901 (415) 454-8868 tel (415) 454-0129 fax info@wra-ca.com www.wra-ca.com

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EXECUTIVE SUMMARY

The purpose of this report is to provide an analysis of natural community and special-status species issues at the site of the proposed Hale Avenue Extension Project in Morgan Hill, Santa Clara County, California (Study Area). WRA, Inc. (WRA) previously performed an assessment of biological resources within the Study Area in 2011 (WRA 2011). This report serves to update the previous biological resources assessment, and to analyze the Study Area for (1) potential to support special-status species and (2) presence of other sensitive biological resources protected by local, state, and federal laws and regulations within the current regulatory framework, and with the most up-to-date information on special-status species and sensitive habitats in the vicinity of the Study Area.

On January 29 and February 5, 2016, WRA conducted a biological resources assessment within the Study Area. WRA observed six biological communities, 44 plant species, and 17 wildlife species. Potentially sensitive biological communities include intermittent stream, seasonal wetland, drainage ditch and excavated stormwater basin. Non-sensitive biological communities include non-native annual grassland, and developed areas. No special-status plant or wildlife species were observed. Ten special-status wildlife species and no special-status plant species have a moderate or high potential to occur within the Study Area.

1.0 INTRODUCTION

WRA Staff previously performed an assessment of biological resources at the site of the proposed Hale Avenue Extension Project in Morgan Hill, Santa Clara County, California (Figure 1), on November 15, 2011). The Hale Avenue Extension Project was subsequently postponed. Given that over four years have passed since the preparation of the previous report, an additional biological evaluation is warranted to supplement the existing report. The Study Area is an approximately one-mile, undeveloped corridor, comprising approximately 32.37 acres, between the intersection of Hale Avenue and West Main Avenue southwest to Dewitt Avenue, between Buck Hill Court and Spring Avenue. The purpose of the assessment was to provide detailed information on the sensitive biological resources for a proposed road construction project as part of the California Environmental Quality Act (CEQA) review for the project.

This report describes the results of the site visit, which assessed the Study Area for the (1) potential to support special-status species and (2) presence of other sensitive biological resources protected by local, state, and federal laws and regulations. Specific findings on the habitat suitability or presence of special-status species or sensitive habitats may require that protocol-level surveys be conducted. This report also contains an evaluation of potential impacts to special-status species and sensitive biological resources that may occur as a result of the proposed Project and potential mitigation measures to compensate for those impacts.

A biological resources assessment (BRA) provides general information on the potential presence of sensitive species and habitats. The BRA is not an official protocol-level survey for listed species that may be required for project approval by local, state, or federal agencies. This assessment is based on information available at the time of the study and on-site conditions that were observed on the date of the site visit.

2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the BRA, including applicable laws and regulations that were applied to the field investigations and analysis of potential project impacts.

2.1 Special-status Species

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. Additionally, CDFW Species of Special Concern, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and CDFW Special-status Invertebrates are all considered special-status species. Although these aforementioned species generally have no special legal status, they are given special consideration under CEQA. Bat species are also evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity; bats named as a “High Priority” or “Medium Priority” species for conservation by the WBWG are typically considered special-status and also considered under CEQA. In addition to regulations for special-status species, most native birds in the United States (including non-status species) are protected by the Migratory Bird Treaty Act of 1918 (MBTA) and the California Fish and Game Code (CFGC), i.e., sections 3503, 3503.5 and 3513. Under these laws, deliberately destroying active bird nests, eggs, and/or young is illegal. The CFGC also protects bat species (including non-status species) and their roosting habitats;

relevant sections include 86; 2000; 2014; 3007; 4150, as well as Title 14 of California Code of Regulations.

Plant species included within the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) with California Rare Plant Rank (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Very few Rank 3 or Rank 4 plant species meet the definitions of Section 1901 Chapter 10 of the Native Plant Protection Act or Sections 2062 and 2067 of the CDFW Code that outlines CESA. However, CNPS and CDFW strongly recommend that these species be fully considered during the preparation of environmental documentation relating to CEQA. This may be particularly appropriate for the type locality of a Rank 4 plant, for populations at the periphery of a species range or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology or occurring on unusual substrates. A description of the CNPS Ranks is provided below in Table 1.

Table 1. Description of CNPS Ranks and Threat Codes

California Rare Plant Ranks (formerly known as CNPS Lists)	
Rank 1A	Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	Rare, threatened, or endangered in California and elsewhere
Rank 2A	Presumed extirpated in California, but more common elsewhere
Rank 2B	Rare, threatened, or endangered in California, but more common elsewhere
Rank 3	Plants about which more information is needed - A review list
Rank 4	Plants of limited distribution - A watch list
Threat Ranks	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California

Critical Habitat

Critical habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species but which are needed for the species' recovery are protected by the prohibition against adverse modification of critical habitat.

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Figure 1. Study Area Location Map

Proposed Hale Avenue Extension
Santa Clara County, California

0 2,000 4,000 Feet

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Map Prepared Date: 3/3/2016
Map Prepared By: Fhourigan
Base Source: Esri Streaming - NAIP 2014
Data Source(s): WRA

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2.2 Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the CWA; state regulations such as the Porter-Cologne Act, Section 1600-1616 of the CFGC, CEQA; Habitat Conservation Plans (HCPs) or local ordinances or policies such as city or county tree ordinances, Special Habitat Management Areas, and General Plan Elements.

2.2.1 Waters of the United States

The U.S. Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the Clean Water Act. The term "Waters of the U.S." is defined broadly as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas—according to the three criteria used to delineate wetlands stated in the *Corps of Engineers Wetlands Delineation Manual* (Corps Manual; Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Regional Supplement; Corps 2008)—are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology.

Areas that are inundated for sufficient duration and depth to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high water mark (OHWM). Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into "Waters of the U.S." (including wetlands) generally requires an individual or nationwide permit from the Corps under Section 404 of the Clean Water Act.

2.2.2 Waters of the State

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope, but has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes "isolated" wetlands and waters that may not be regulated by the Corps under Section 404.

"Waters of the State" are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact "Waters of the State", are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to "Waters of the State," the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

2.2.3 Streams, Lakes, and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFW under Sections 1600-1616 of California Fish and Game Code. Alterations to or work within or adjacent to streambeds or lakes generally requires a 1602 Lake and Streambed Alteration Agreement. The term stream, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG ESD 1994). Riparian is defined as, “on, or pertaining to, the banks of a stream”; therefore, riparian vegetation is defined as, “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFG ESD 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

2.2.4 Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its Natural Diversity Database (CNDDB; CDFW 2016a). Sensitive plant communities are also identified by CDFW (CDFG 2003, CDFG 2007, CDFG 2009). CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2014) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, regulations or by the CDFW or USFWS must be considered and evaluated under CEQA (California Code of Regulations: Title 14, Div. 6, Chap. 3, Appendix G). Specific habitats may also be identified as sensitive in City or County General Plans or ordinances.

2.2.5 Relevant Local Policies, Ordinances, Regulations

Santa Clara Valley Habitat Plan

The Santa Clara Valley Habitat Plan (Habitat Plan; ICFI 2012) is a regional planning document that allows covered projects to use a streamlined process for permitting and mitigation. The Habitat Plan is both a Habitat Conservation Plan (HCP) and a Natural Community Conservation Plan (NCCP) that provides a higher level of environmental protection and conservation for 18 species of plants and wildlife including eight that are listed as threatened or endangered, under either the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA) or both, and one species, tricolored blackbird (*Agelaius tricolor*), which was recently designated as a State-Candidate for listing in December 2015. The Habitat Plan also protects wetland, streams, and riparian habitats that are subject to the federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act, and Section 1600-1616 of the CFGC, and other sensitive biological communities as defined by the NCCP. The Habitat Plan also includes an agreement between state/federal wildlife and wetland regulators and local jurisdictions, which allow public and private entities to engage in the "incidental take" of listed

species (i.e., to destroy or degrade habitat) in exchange for the implementation of Habitat Plan-prescribed measures to avoid, minimize or compensate for adverse effects on endangered species and natural communities.

The geographic scope of the Habitat Plan extends from the Santa Clara/Alameda County border south to the Santa Clara/San Benito County border and from the western edge of San Jose east to the eastern edge of the Coyote Creek watershed or the County boundary. The Habitat Plan covers approximately 510,000 acres, primarily within south Santa Clara County. The entire Study Area is located within the Habitat Plan area, and thus, our analysis is inclusive of covered species and habitats as defined by and potential mitigation measures that may be required through the Habitat Plan.

Morgan Hill Tree Protection Ordinance

The City of Morgan Hill has a tree ordinance that protects significant trees within City limits. Chapter 12.32, "Restrictions on Removal of Significant Trees", of the Morgan Hill Municipal conde defines a "significant tree" as all native species indigenous to the Morgan Hill region, including but not limited to oaks (*Quercus* spp.), California bay (*Umbellularia californica*), madrone (*Arbutus menziesii*), California sycamore (*Platanus racemosa*), and alder (*Alnus* spp.) with a circumference of 18 inches (5.7 inches diameter) or more measured at 4.5 feet above the ground or immediately below the lowest branch, whichever is lower, or any non-indigenous tree with a circumference of 40 inches (12.7 inches diameter) or more measured at 4.5 feet above the ground or immediately below the lowest branch, whichever is lower. In addition, all trees within the City right-of-way (e.g. street trees) regardless of species and size are protected.

Morgan Hill Citywide Burrowing Owl Habitat Mitigation Plan

The City of Morgan Hill has a Citywide Burrowing Owl Habitat and Mitigation Plan (Citywide Plan; City of Morgan Hill 2003) that requires burrowing owl (*Athene cunicularia*) surveys before land is disturbed or graded as well as assesses fees for burrowing owl mitigation. Per recent changes to the City's policy, the fees are provided to the Santa Clara Valley Habitat Agency for managing burrowing owl habitat under the Habitat Plan. The City of Morgan Hill is bound by its General Plan to collect these burrowing owl mitigation fees until 2020. The City assesses these burrowing owl mitigation fees regardless of the potential for burrowing owl presence at a particular property.

3.0 METHODS

On January 29 and February 5, 2016, the Study Area was traversed on foot to determine (1) biological communities present within the Study Area, (2) if existing conditions provide suitable habitat for any special-status plant or wildlife species, and (3) if sensitive habitats are present. All plant and wildlife species encountered were recorded and are summarized in Appendix A.

3.1 Biological Communities

Prior to the site visit, the online soil survey (USDA, NRCS 2016) was examined to determine if any unique soil types with potential to support sensitive plant communities and/or aquatic features are present in the Study Area. In addition, we reviewed the Morgan Hill and Mount Madonna United States Geological Survey (USGS) 7.5-minute quadrangle topographic maps

(USGS 1980, 1994), the National Wetlands Inventory (NWI) (USFWS 2016a), and aerial photographs of the Study Area (Google Earth 2016) to identify potential sensitive habitats and areas for further investigation during the site visit. Following the site visit, biological communities present in the Study Area were classified based on existing plant community descriptions described in *A Manual of California Vegetation, Online Edition* (CNPS 2015a) and classified by NatureServe Comprehensive Ecological Reports (2014). However, in some cases it was necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

3.1.1 Non-sensitive Biological Communities

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA or other state, federal, and local laws, regulations, and ordinances. These communities may, however, provide suitable habitat for some special-status plant or wildlife species and are identified or described in Section 4.1.1.

3.1.2 Sensitive Biological Communities

Sensitive biological communities are defined as those communities that are given special protection under CEQA and other applicable federal, state, and local laws, regulations and ordinances. Applicable laws and ordinances are discussed above in Section 2.0. Special methods used to identify sensitive biological communities are discussed below.

Wetlands and Waters

The Study Area was surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the Corps, RWQCB, or CDFW were present. The preliminary assessment of wetlands was based on the presence of wetland plant indicators, wetland hydrology and/or wetland soils. Any potential wetland areas were identified as areas dominated by plant species with a wetland indicator status[1] of OBL, FACW, or FAC as given on the current National Wetlands Plant List (Lichvar 2014). Evidence of wetland hydrology may include direct evidence (i.e., primary indicators) such as visible inundation or saturation, algal mats, or oxidized root channels, or indirect evidence (i.e., secondary indicators) such saturation visible on aerial imagery. Some indicators of wetland soils include dark colored soils, soils with a sulfidic odor, or soils that contain redoximorphic features, as defined by the Natural Resources Conservation Service (NRCS) publication *Field Indicators of Hydric Soils in the United States* (NRCS 2010). The preliminary assessment of non-wetland waters assessment was based primarily on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as an OHWM or a defined drainage course.

[1] OBL = Obligate, always found in wetlands (> 99% frequency of occurrence); FACW = Facultative Wetland, usually found in wetlands (67-99% frequency of occurrence); FAC = Facultative, equal occurrence in wetland or non-wetlands (34-66% frequency of occurrence).

Other Sensitive Biological Communities

The Study Area was evaluated for the presence of other sensitive biological communities, including riparian areas, sensitive plant communities recognized by CDFW. Prior to the site visit, aerial photographs, local soil maps, the List of Vegetation Alliances (CDFG 2010), and A Manual of California Vegetation, Online Edition (CNPS 2015a) were reviewed to assess the potential for sensitive biological communities to occur in the Study Area. If present, these communities are described in Section 4.1.2 below.

3.2 Special-status Species

3.2.1 Literature Review

The potential for special-status species to occur in the Study Area was evaluated by first determining which special-status species occur in the vicinity of the Study Area through a literature and database search. Database searches for known occurrences of special-status species focused on the Santa Teresa Hills, Morgan Hill, Mount Sizer, Gilroy, Mount Madonna, and Loma Prieta 7.5 minute USGS quadrangles. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of the Study Area:

- California Natural Diversity Database (CNDDB) records (CDFW 2016a)
- USFWS IPaC Trust Report (USFWS 2016b)
- CNPS Inventory records (CNPS 2015b)
- Consortium of California Herbaria (CCH 2016)
- CDFG publication “California Bird Species of Special Concern” (Shuford and Gardali 2008)
- eBird online database of birding records (eBird 2016)
- CDFW California Wildlife Habitat Relationships (CWHR) Online Database (CDFW 2016c)
- Santa Clara County Breeding Bird Atlas (Bousman 2007)
- CDFG publication “Amphibians and Reptile Species of Special Concern in California” (Jennings 1994)
- Santa Clara Valley Habitat Plan (ICFI 2012)
- WBWG species accounts (WBWG 2016)

3.2.2 Site Assessment

A site visit was made to the Study Area to search for suitable habitats for special-status species. Habitat conditions observed at the Project Site were used to evaluate the potential for presence of special-status species based on these searches and the professional expertise of the investigating biologists. The potential for each special-status species to occur in the Study Area was then evaluated according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recently recorded (i.e. CNDDB, Santa Clara Valley Habitat Plan, or other reports) on the site.

The site assessment identifies the presence or absence of suitable habitat for each special-status species known to occur in the vicinity in order to determine its potential to occur in the Study Area. The site visit does not constitute a protocol-level survey, nor does it determine the actual presence or absence of a species. However, if a special-status species was observed during the site visit, its presence was recorded and is discussed here.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of WRA biologists with experience working with the species and habitats. If necessary, recognized experts in individual species biology were contacted to obtain the most up-to-date information regarding species biology and ecology.

If a special-status species was observed during the site visit, its presence was recorded and is discussed in Section 4.2. For some species, a site assessment visit at the level conducted for this report may not be sufficient to determine presence or absence to the specifications of regulatory agencies. In these cases, a species may be assumed to be present or further protocol-level special-status species surveys may be necessary. Special-status species for which further protocol-level surveys may be necessary are described in Section 5.0.

4.0 RESULTS

The Study Area is set in a largely suburban area with a mix of housing developments, schools, and churches among patches of remnant oak woodland and rolling grassland. The northern section of the Study Area (from West Dunne Avenue north to West Main Street) is bounded by an electrical substation and an associated vacant lot to the north, residential and commercial developments to the west, and a mix of residential developments and remnant oak woodland to the east. Several large electrical transmission towers are located in the grassland to the west of the Study Area. The southern section of the Study Area (from Dewitt Avenue north to West Dunne Avenue) is bounded by residential developments to the east and a mix of highly disturbed remnant grassland and residential developments to the west. Evidence of past ground disturbance was found throughout much of the Study Area, including evidence of agricultural activities, construction staging, discing, roads and trails, sewer lines and associated stormwater containment infrastructure, and placement of fill material. .

4.1 Biological Communities

Table 2 summarizes the area of each biological community type observed in the Study Area. The majority of the Study Area is characterized by highly disturbed non-native annual grassland. The northern section of the Study Area contains an intermittent stream, and drainage ditches supporting hydrophytic vegetation, and the southern section of the Study Area contains two ponded areas supporting wetland vegetation. Descriptions for each biological community are contained in the following sections. Biological communities within the Study Area are shown on Figure 2.

Table 2. Summary of Biological Communities in the Study Area

Community Type	Area (acres [linear feet])
Non-Sensitive	
Developed	4.43
Non-native annual grassland	27.56
Sensitive	
Intermittent stream (Llagas Creek)	0.05 [295 l.f.]
Drainage ditches	0.05 [643 l.f.]
Excavated stormwater basin	0.16
Seasonal wetland	0.12

4.1.1 Non-sensitive biological communities

Developed

Developed communities are not described in the literature, but consist primarily of built structures, landscaping, and paved and unpaved roads and parking areas. Within the Study Area, developed areas include a portion of the electrical substation and associated parking lot in the northern portion of the Study Area, roads, and single-family residential areas. Vegetation within developed areas predominantly consists of ornamental tree and shrub species including American sweetgum (*Liquidambar styraciflua*), Mexican fan palm (*Washingtonia robusta*), Deodar cedar (*Cedrus deodara*), and oleander (*Nerium oleander*) but may also contain native trees species such as coast live oak (*Quercus agrifolia*).

Non-native annual grassland

The majority of the Study Area is dominated by non-native annual grassland (Holland 1986) with a variety of non-native herbaceous semi-natural stands described by CNPS (2016a). Non-native annual grasslands include areas that have been partially developed or have been used in the past for agriculture. However, these areas are not currently used for agricultural activities and have been allowed to revert to a semi-natural condition. Large portions of the grassland in the Study Area appear to be regularly mowed and/or disced. Vegetation near the substation in the northern section of the Study Area appears to be controlled through a combination of mowing, discing, and herbicide treatments. Dominant plant species observed in the non-native

Study Area - 32.37 acres

BioComm

Developed - 4.43 acres

Drainage ditch - 0.05 acre

Excavated stormwater basin - 0.16 acre

Intermittent Stream - 0.05 acre

Non-native annual grassland - 27.56 acres

Seasonal wetland - 0.12 acre

Figure 2. Biological Communities within the Study Area

N W E S

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Proposed Hale Avenue Extension
Santa Clara County, CA

0 100 200 400
Feet

Map Prepared Date: 3/15/2016
Map Prepared By: Fhourigan
Base Source: Esri Streaming - NAIP 2014
Data Source(s): WRA

Path: L:\Acad 2000 Files\21000\21059\GIS\ArcMap\FigX_BioComms_20160303.mxd

annual grassland in the Study Area include wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), yellow star thistle (*Centaurea solstitialis*), chicory (*Cichorium intybus*), Bermuda grass (*Cynodon dactylon*), wildrye (*Elymus* sp.), bristly ox tongue (*Helminthotheca echioides*), summer mustard (*Hirschfeldia incana*), and additional ruderal species. The non-native annual grassland in the southern section of the Study Area contains emergent mature native and non-native trees at low densities including coast live oak (*Quercus agrifolia*), Chinese pistache (*Pistacia chinensis*), Deodar cedar and redwood (*Sequoia sempervirens*). Due to their large size (12 to 36 inches DBH, estimated visually), these trees are potentially protected under the City of Morgan Hill Tree Ordinance. The non-native annual grassland in the northern section of the Study Area was largely devoid of trees. Disced areas within the grasslands were observed to have a dominance of forbs, including storksbill (*Erodium botrys*), common groundsel (*Senecio vulgaris*), lupine *(Lupinus* sp.), red maids (*Calandrinia ciliata* var. *menziesi*i), California poppy (*Eschscholzia californica*), and common fiddleneck (*Amsinckia intermedia*).

4.1.2 Sensitive Biological Communities

Four potentially sensitive biological communities were observed in the Study Area, including intermittent stream, drainage ditch, seasonal wetland, and an excavated stormwater basin. Descriptions for each potentially sensitive biological community are contained below.

Intermittent stream

Approximately 0.05-acre (295 linear feet) of intermittent stream occurs within the northern portion of the Study Area. Based on review of NWI (USFWS 2016a), and U.S. Geographical Survey (USGS) topographical maps, the intermittent stream appears to be a USGS “blue-line” stream (Llagas Creek) which has been altered for flood control. Llagas Creek enters the Study Area via a box culvert underneath West Main Avenue, and flows from north to south. Indicators of OHWM included bed and bank, sediment sorting, wrack lines and water-stained leaves. Surface water was present in isolated pools downstream of the Study Area. A portion of the intermittent stream was dominated by hydrophytic vegetation including tall flatsedge (*Cyperus eragrostis*), common knotweed (*Polygonum aviculare* ssp. *depressum*), curly dock (*Rumex crispus*), and a patch of California tule (*Schoenoplectus californicus*). The banks of the stream lacked riparian vegetation and were dominated by upland plants including wild oats, cleavers (*Galium aparine*), and garden vetch (*Vicia sativa*), and planted trees including Northern California black walnut (*Juglans hindsii*), and Chinese pistache.

Drainage ditches

Approximately 0.05-acre (643 linear feet) of drainage ditches occur within the northern portion of the Study Area. The drainage ditch runs along the southern side of the electrical substation to the west of Llagas Creek. The drainage ditch is believed to be a ditch dug in uplands for drainage control, and is connected to Llagas Creek via a storm drain that flows into an underground culvert. The drainage ditch appears to receive sheet flow from surrounding uplands and as well as from a concrete retention basin inside the electrical substation. The drainage ditch contained only discontinuous indicators of OHWM, and had sparse vegetation cover which included tall flatsedge, and iris-leaved rush (*Juncus xiphioides*). Patches of mule fat (*Baccharis salicifolia*) and arroyo willow (*Salix lasiolepis*) were observed within this ditch.

Seasonal Wetland

Seasonal wetlands occupy approximately 0.12 acre of the Study Area and are located in the northern and southern portions of the Study Area. One seasonal wetland was observed in the northern section of the Study Area, south of the substation, and two seasonal wetlands were observed in the southern section of the Study Area. The northern wetland is in a low spot in the topography approximately 50 feet to the west of the end of the drainage ditch that runs along the south of the substation. Plant species observed at this wetland include iris-leaved rush, curly dock and facultative annual grasses.

The largest of the seasonal wetlands is located in the southern section of the Study Area approximately 200 feet south of West Dunne Avenue. This depressional seasonal wetland is surrounded by a wide berm on the north and west side and residential fences on the east. Inundation was observed at time of site visit, and dominant vegetation in the seasonal wetland included seaside barley (*Hordeum marinum*), rush (*Juncus* sp.), curly dock and algae. A third small seasonal wetland was observed at the bottom of a former stormwater retention basin in the southern portion of the Study Area. The fenced-off basin contained two culverts at the bottom of the basin. Although water was not present at the time of the site visit, vegetation at the bottom of the basin between the two culverts consisted of hydrophytic vegetation including a small arroyo willow patch with an understory of spiny rush (*Juncus acutus*). A narrow, unvegetated channel which appeared to flow between the two culverts was present in the small wetland area.

Excavated storm water basin

A fenced-in excavated storm water basin occupies approximately 0.16 acre within the northern portion of the Study Area, approximately 100 feet northwest of the terminus of Noble Court. The man-made basin appears to collect stormwater flow from the local storm sewer system, and appears to be regularly maintained. Open water was present in the man-made basin, and vegetation on the banks of the basin, was sparse and dominated by upland shrubs, grasses and forbs including coyote brush (*Baccharis pilularis* ssp. *consanguinea*), wild oat and summer mustard.

4.2 Special-status Species

4.2.1 Plants

Based upon a review of the resources and databases listed in Section 3.2.1, 42 special-status plant species have been documented in the vicinity of the Study Area, including the nine that are covered species (or Species of Local Concern, “SLC”) per the Santa Clara Valley Habitat Plan (Appendix B.1, Figure 3). A large portion of these species occur in habitats such as coastal dunes/scrub, chaparral, broad leaved upland forest, or cismontane woodland which are not found in the Study Area. Of the special-status species that occur in grasslands, most occur on unique substrates such as serpentine or alkaline soils which are also absent from the Study Area. The heavy disturbance level (mowing, discing, herbicide treatments) in the Study Area is likely to preclude any other special-status plant species.

Appendix B.1 summarizes the potential for occurrence for each special-status plant species occurring in the vicinity of the Study Area. No special-status plant species were observed in the Study Area during the 2011 or February 5, 2016 site visits.

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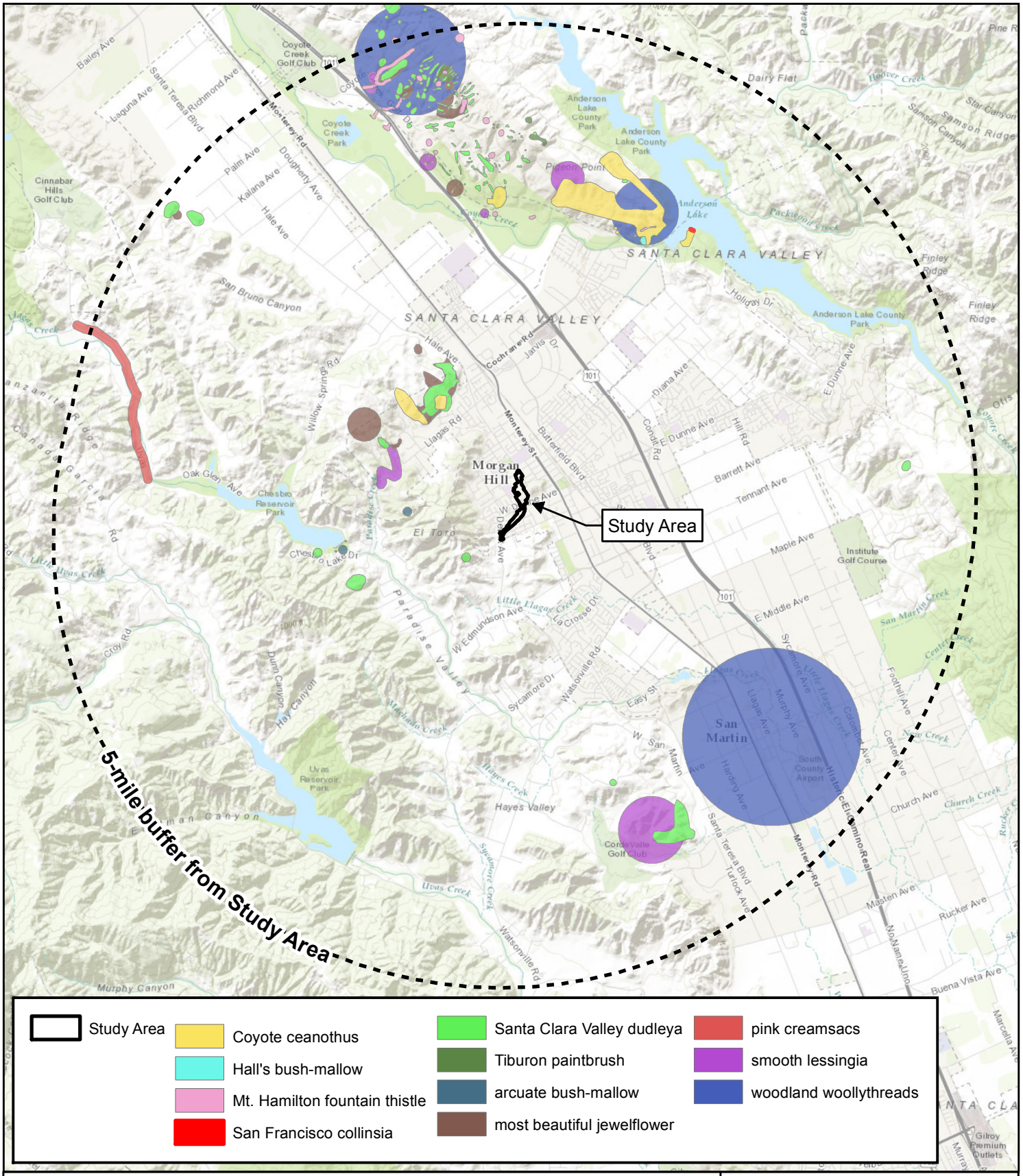

Figure 3. Special-status Plant Occurrences within Five Miles of the Study Area

Proposed Hale Avenue Extension
Santa Clara County, California

0 0.5 1 2 3
Miles

ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 3/3/2016
Map Prepared By: Fhourigan
Base Source:
Data Source(s): WRA

Path: L:\Acad 2000 Files\21000\21059\GIS\ArcMap\FigX_CNDDB_Plants.mxd

4.2.2 Wildlife

Fifty -five special-status species of wildlife have been recorded to occur or may occur in the vicinity of the Study Area (Appendix B, Figure 4). Appendix B summarizes the potential for each of these species to occur in the Study Area. No special-status wildlife species were observed in the Study Area during the site assessment; however, two species, oak titmouse (*Baeolophus inornatus*) and Nuttall's woodpecker (*Picoides nuttallii*) were observed during WRA's assessment in 2011, and have a high potential of occurring at the site. Four special-status wildlife species have a moderate potential to occur in the Study Area. One species, the tricolored blackbird (*Agelaius tricolor*) currently is unlikely to occur within the Study Area. However, historic aerials suggest that emergent vegetation has previously been present in the excavated stormwater basin in the northwest portion of the Study Area, and the Habitat Plan mapping tool identifies this pond as a tricolored blackbird survey area (Google Earth 2016, Santa Clara Valley Habitat Agency Geobrowser 2016). If emergent vegetation is allowed to grow within the basin, there is a moderate potential that this species may use this vegetation for nesting. Collectively, these seven species are discussed in further detail below.

Species with High Potential to Occur

Nuttall's woodpecker (*Picoides nuttallii*). USFWS Bird of Conservation Concern. Nuttall's Woodpecker, common in much of its range, is a year-round resident throughout most of California west of the Sierra Nevada. Typical habitat is oak or mixed woodland, and riparian areas (Lowther 2000). Nesting occurs in tree cavities, principally those of oaks and larger riparian trees. Nuttall's woodpecker also occurs in older residential settings and orchards where trees provide suitable foraging and nesting habitat. This species forages on a variety of arboreal invertebrates. This species was observed within the Study Area during WRA's initial assessment of the site in 2011, and suitable habitat for foraging and nesting remains. Overall, this species has a high potential of occurring and nesting within or adjacent to the Study Area.

Oak titmouse (*Baeolophus inornatus*), USFWS Bird of Conservation Concern. This relatively common species is year-round resident throughout much of California including most of the coastal slope, the Central Valley and the western Sierra Nevada foothills. In addition, the species may also occur in residential settings where landscaping provides foraging and nesting habitat.Its primary habitat is woodland dominated by oaks. Local populations have adapted to woodlands of pines and/or junipers in some areas (Cicero 2000). The oak titmouse nests in tree cavities, usually natural cavities or those excavated by woodpeckers, though they may partially excavate their own (Cicero 2000). Seeds and arboreal invertebrates make up the birds' diet. This species was observed within the Study Area during WRA's initial assessment of the site in 2011, and suitable habitat for foraging and nesting remains. Overall, this species has a high potential of occurring and nesting within or adjacent to the Study Area.

Species with Moderate Potential to Occur

White-tailed kite (*Elanus leucurus*); CDFG Fully Protected Species. Kites occur in low elevation grassland, agricultural, wetland, oak woodland, and savannah habitats. Riparian zones adjacent to open areas are also used. Vegetative structure and prey availability seem to be more important than specific associations with plant species or vegetative communities.

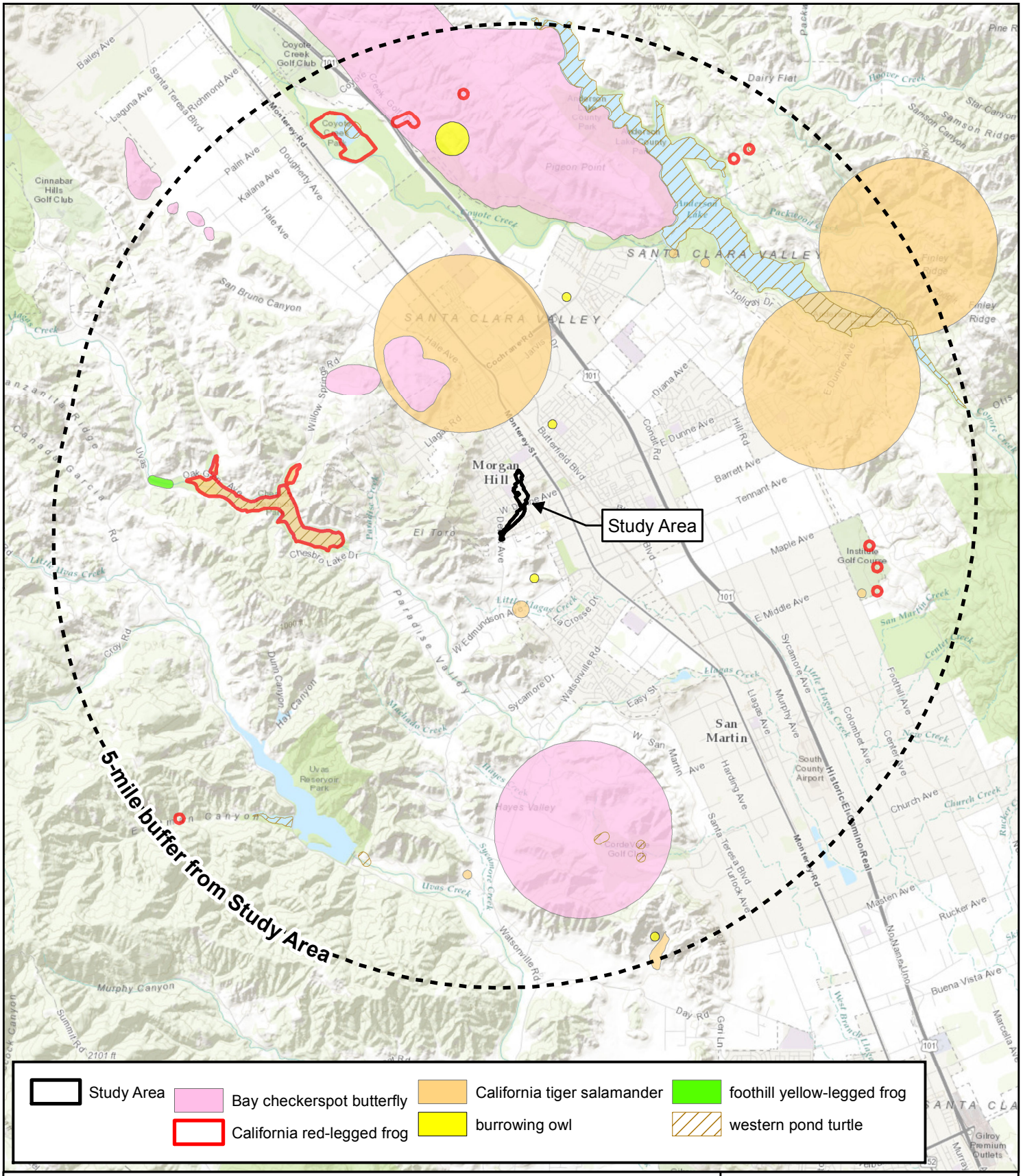

Figure 4. Special-status Wildlife Occurrences within Five Miles of the Study Area

Proposed Hale Avenue Extension
Santa Clara County, California

0 0.5 1 2 3
Miles

ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 3/3/2016
Map Prepared By: Fhourigan
Base Source:
Data Source(s): WRA

Path: L:\Acad 2000 Files\21000\21059\GIS\ArcMap\FigX_CNDDB_Wildlife.mxd

Lightly grazed or ungrazed fields generally support large prey populations and are often preferred to other habitats. Kites primarily feed on small mammals, although, birds, reptiles, amphibians, and insects are also taken. Nest trees range from single isolated trees to trees within large contiguous forests. Preferred nest trees are extremely variable, ranging from small shrubs (less than 10 ft. tall), to large trees (greater than 150 ft. tall; Dunk 1995). This species is common in the Santa Clara Valley, and the Study Area provides open foraging habitat and trees suitable for nesting, although adjacent human disturbance may reduce nesting potential (eBird 2016). Overall, this species has a moderate potential of occurring and nesting within or adjacent to the Study Area.

Burrowing owl (*Athene cunicularia*), CDFW Species of Special Concern; USFWS Bird of Conservation Concern, Santa Clara Valley Habitat Plan Covered Species. The burrowing owl occurs as a year-round resident and winter visitor in much of California's lowlands, inhabiting open areas with sparse or non-existent tree or shrub canopies. Typical habitat is annual or perennial grassland, although human-modified areas such as agricultural lands and airports are also used (Poulin et al. 1993). This species is dependent on burrowing mammals to provide the burrows that are characteristically used for shelter and nesting, and in northern California is typically found in close association with California ground squirrels (*Spermophilus beecheyi*). Manmade substrates such as pipes or debris piles may also be occupied in place of burrows. Prey consists of insects and small vertebrates. Breeding typically takes place from March to July.

Although this species is not known to nest in the Morgan Hill area in recent years and no evidence of occupancy was observed at any burrows during the site visits, suitable burrow habitat is available within the Study Area, and this species may at least winter within the Study Area (ICFI 2012). This species has been documented to occur approximately 0.5 mile south of the Study Area in 2002 (CDFW 2016a). Given the proximity of documented occurrences and the presence of suitable burrow habitat, there is a moderate potential for burrowing owl to occur in the Study Area.

Loggerhead shrike (*Lanius ludovicianus*), CDFW Species of Special Concern, USFWS Bird of Conservation Concern. The loggerhead shrike is a year-round resident and winter visitor in lowlands and foothills throughout California. This species is associated with open country with short vegetation and scattered trees, shrubs, fences, utility lines and/or other perches. Although they are songbirds, shrikes are predatory and forage on a variety of invertebrates and small vertebrates. Captured prey items are often impaled for storage purposes on suitable substrates, including thorns or spikes on vegetation, and barbed wire fences. Nests in trees and large shrubs; nests are usually placed three to ten feet off the ground (Shuford and Gardali 2008). This species can be found in suburban areas, and the Study Area contains suitable open grasslands for foraging and trees for nesting. Overall, this species has a moderate potential of occurring and nesting within or adjacent to the Study Area.

Yellow-billed magpie (*Pica nuttalli*), USFWS Bird of Conservation Concern. The yellow-billed magpie is endemic to California, occurring year-round in the Central Valley and associated foothills, and the central-southern Coast Ranges. This species inhabits oak savanna, open oak woodland and similar park-like areas including the margins of stream courses and some agricultural areas. Breeding typically occurs in loose colonies. The large, dome-shaped nests are placed high in trees, usually oaks, and often in clumps of mistletoe (Koenig and Reynolds 2009). This species is an omnivore and an opportunistic feeder. Like the loggerhead shrike, this species can be found in suburban areas, and the Study Area

contains suitable open grasslands for foraging and trees for nesting. Overall, this species has a moderate potential of occurring and nesting within or adjacent to the Study Area.

Tricolored Blackbird

Tricolored blackbird, although currently unlikely to occur within the Study Area, may have moderate potential to occur there in the future if emergent vegetation is allowed to grow within the excavated stormwater basin in the northern portion of the Study Area. This species is discussed in greater detail below.

Tricolored blackbird (*Agelaius tricolor*). State Candidate (Endangered), CDFW Species of Special Concern, USFWS Bird of Conservation Concern, Santa Clara Valley Habitat Plan Covered Species. The tricolored blackbird is a locally common resident in the Central Valley and along coastal California. Most tricolored blackbirds reside in the Central Valley March through August, then moving into the Sacramento-San Joaquin Delta and east to Merced County and coastal locations during winter (Meese et al. 2014). This species breeds adjacent to fresh water, preferring emergent wetlands with tall, dense cattails or tules, thickets of willow or blackberry, and/or tall herbs. Flooded agricultural fields with dense vegetation are also used (Shuford and Gardali 2008). This species is highly colonial; nesting habitat must be large enough to support a minimum of 30 pairs, and colonies are commonly substantially larger (up to thousands of pairs). The tricolored blackbird often intermingles with other blackbird species during the non-breeding season. Individuals typically forage up to 5.6 miles (9 kilometers) from their colonies although in most cases only a small part of the area within this range provides suitable foraging (Hamilton and Meese 2006).

At the time of the January and February WRA site visits, none of the aquatic areas within or adjacent to the Study Area contained emergent vegetation to support nesting tricolored blackbirds, and tricolored blackbird has not been documented to nest within or adjacent to the Study Area (Bousman 2007, CDFW 2016a). In its current state, the Study Area may provide occasional foraging habitat outside of the nesting season for this species if the grassland areas remain undisced. However, historic aerials suggest that emergent vegetation has previously been present in the excavated stormwater basin in the northwest portion of the Study Area, and the Habitat Plan mapping tool identifies this pond as a tricolored blackbird survey area (Google Earth 2016, Santa Clara Valley Habitat Agency Geobrowser 2016). If emergent vegetation is allowed to grow within the basin, there is a moderate potential that this species may use this vegetation for nesting.

4.2.3 Federally Listed Species that Occur in the Region that are Unlikely to Occur in the Study Area

Federally listed species that are documented within the vicinity of the Study Area, but are unlikely to occur include: California tiger salamander (*Ambystoma californiense*) and California red-legged frog (*Rana draytonii*). These species are discussed below.

California tiger salamander (*Ambystoma californiense*); Federal Threatened Species, State Threatened Species, Santa Clara Valley Habitat Plan Covered Species. California tiger salamander (CTS) is restricted to grasslands and low-elevation foothill regions in California (generally under 1500 feet) where it uses seasonal aquatic habitats for breeding. The salamanders breed in natural ephemeral pools that have at least 10 weeks of continuous inundation or in ponds that mimic ephemeral pools (stock ponds that go dry) and occupy

substantial areas surrounding the breeding pool as adults. CTS spend most of their time in grasslands surrounding breeding pools. They survive hot, dry summers by entering underground refugia (such as burrows created by ground squirrels and other mammals and deep cracks or holes in the ground) where the soil atmosphere remains near the water saturation point. During wet periods, the salamanders may emerge from refugia and feed in the surrounding grasslands. CTS have been documented to occur approximately 0.8 mile south of the Study Area (CDFG 2016).

CTS are not likely to occur in the Study Area because:

- The Study Area is largely isolated by development with significant barriers to dispersal, such as residential development and roads, present between the site and known CTS occurrences; therefore, it does not represent CTS dispersal habitat. This development has been in place for at least 20 years (Google Earth 2016).
- The two closest CTS occurrences to the Study Area (located on the Santa Clara Valley floor in Morgan Hill) are both considered extirpated by herpetological expert Mark Jennings (CDFW 2016a).
- Evidence of past ground disturbance is found throughout much of the Study Area, including agricultural activities, construction staging, discing, sewer lines and associated infrastructure, and placement of fill material. This repeated ground disturbance precludes any remnant CTS population in the Study Area that may have been within the Study Area at the time the surrounding development was built.
- Any potential aquatic breeding habitat present within the Study Area likely lacks a sufficiently long hydroperiod to support complete CTS larval development. The hydroperiod of the shallow seasonal wetland south of West Dunne Avenue appears to be fairly short; water from rains just prior to the January 29 site visit had nearly completely drawn down by the February 5 site visit. Additionally, the fully vegetated wetland suggests ponding is not suitable for CTS reproduction. The excavated stormwater basin may be suitable for breeding, however, the hydroperiod of this basin is unknown, and other factors likely already preclude CTS from the area. Other aquatic areas within the Study Area include man-made drainage basins and ditches that are ephemeral and would not support breeding CTS.

California red-legged frog (*Rana draytonii*); Federal Threatened Species, CDFW Species of Special Concern, Santa Clara Valley Habitat Plan Covered Species. The California red-legged frog (CRLF) is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, red-legged frogs disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat is characterized by dense, shrubby, riparian vegetation and deep, still or slow-moving water. Breeding occurs between late November and late April. CRLF estivate (period of inactivity) during the dry months in small mammal burrows, moist leaf litter, incised stream channels, and large cracks in the bottom of dried ponds. The nearest documented occurrence of this species is approximately 1 mile west of the Study Area in Chesbro Reservoir.

CRLF are unlikely to occur in the Study Area because:

- The Study Area is largely isolated by development with significant barriers to dispersal, such as residential development and roads, present between the site and known CRLF

occurrences; therefore, it does not represent CRLF dispersal habitat. This development has been in place for at least 20 years (Google Earth 2016).

- No suitable aquatic breeding or non-breeding habitat is present in or near the Study Area. Although CRLF can occur in ephemeral or permanent streams or ponds, populations probably cannot be maintained in ephemeral aquatic habitats in which all surface water disappears (Jennings and Hayes 1994). The drainage basins and ditches and the seasonal wetland within the Study Area are ephemeral and do not likely have a suitably long hydroperiod to support CRLF reproduction. The excavated stormwater basin may be suitable for breeding, however, the hydroperiod of this basin is unknown, and other factors including surrounding development likely already preclude CRLF from the area.

5.0 SUMMARY AND RECOMMENDATIONS

Three potentially sensitive biological communities were identified within the Study Area. Seven special-status wildlife species have potential to occur. No special-status plant species have a moderate or high potential to occur. The following sections present recommendations for future studies and/or measures to avoid or reduce impacts to sensitive habitats and special-status wildlife with potential to occur in the Study Area.

5.1 Biological Communities

Potentially sensitive biological communities within the Study Area include intermittent stream, drainage ditches, and seasonal wetland and the excavated stormwater basin in the northern section of the Study Area and two seasonal wetlands in the southern section of the Study Area. These aquatic features may be within the jurisdiction of the Corps under Section 404 of the Clean Water Act and the RWQCB under the Porter Cologne Act and Section 401 of the Clean Water Act. A jurisdictional wetland delineation is recommended; however, permission of property owners will need to be acquired prior to conducting an official delineation.

5.2 Special-status Plant Species

Of the 42 special-status plant species known to occur within the vicinity of the Study Area, most occur in habitats such as coastal dune/scrub, chaparral, or cismontane forest, or on alkaline or serpentine soils, none of which occur within the Study Area. Of these 42 species, none are likely to be present within the Study Area due to a lack of necessary habitat and soil requirements and/or heavy disturbance. No special-status plant species were observed during the 2011 or 2016 site visits and no protocol-level rare plant surveys are recommended.

5.3 Protected Trees

A number of large trees occur within the southern section of the Study Area. These trees range from 12 to 36 inches DBH (estimated visually) and are likely protected by the City of Morgan Hill Tree Ordinance. A more accurate assessment including species, location, DBH, and condition of the trees within and adjacent to the Study Area is recommended. If Project-related removal of one or more protected trees, a tree removal permit from the City of Morgan Hill will likely be required. Tree removal permit conditions of approval may include replacement of removed trees with plantings of trees acceptable to the City of Morgan Hill community development director.

5.4 Special-status Wildlife Species

Of the 55 special-status wildlife species previously documented in the vicinity, seven were determined to have the potential to occur within the Study Area. Most of the species found in the review of background literature occur in habitats not found in the Study Area. Habitat suitability for grassland-associated species in the Study Area is reduced due to habitat fragmentation, previous and existing disturbance, and adjacent development.

This assessment determined that seven special-status bird species may use the Study Area for nesting, and burrowing owl may also winter within the Study Area. It is recommended that pre-construction nesting bird surveys be conducted within fourteen days of ground disturbance to avoid disturbance to active nests, eggs, and/or young during the nesting season.

Additionally, pre-construction burrowing owl surveys should be conducted irrespective of the time of year, as this species inhabits underground burrows year-round. As per the Citywide Plan, fees associated with impacts to potential burrowing owl habitat will be required.

6.0 POTENTIAL IMPACTS AND MITIGATION

The proposed project will result in the creation of a two-lane road running from the current terminus of Hale Avenue in the northern section of the Study Area to De Witt Avenue in the southern section of the Study Area. Most of the Study Area is comprised of ruderal non-native annual grassland, which is not considered a sensitive habitat under CEQA, however most of the area mapped as non-native annual grassland within the Study Area is located within Land Cover Fee Zone B (Agriculture and Valley Floor Lands) of the Habitat Plan and a Land Cover development fee may apply to portions of the Project which are within this Fee Zone.

The Study Area is surrounded by residential development, meaning that no significant impacts to wildlife migratory corridors are likely to occur. The current project design will potentially impact seasonal wetlands in the southern section of the Study Area and may impact portions of the intermittent stream and drainage ditches at the northern end of the Study Area. The project may also impact potential breeding bird and/or burrowing owl habitat within the Study Area.

Potential impacts to sensitive biological communities and special-status species within the Study Area were evaluated based on conditions observed during the site visit, and 90 percent engineering plans for the Project (Mark Thomas & Company 2012). Preliminary impacts to biological communities are shown on Figure 5, and described below. However, impacts to sensitive biological communities may change based on the results of a jurisdictional wetland delineation and final Project plans. Potentially significant impacts as a result of the project and mitigation measures are discussed in detail below.

6.1 Potentially Significant Impacts

Sensitive Biological Communities

The project as currently planned will impact approximately 0.11 acre of seasonal wetlands south of West Dunne Avenue and may impact less than 0.01 acre (46 linear feet) of intermittent stream, and 0.01 acre (78 linear feet) in the northern portion of the Study Area. These areas

Impacts to Biological Communities	
Biological Community	Acres
Developed	2.39
Drainage Ditch	0.01
Non-native Annual Grassland	9.47
Seasonal Wetland	0.11
Intermittent Stream	<0.01

Study Area - 32.37 acres

Impacted Areas

Limit of Development - 12.00 acres

Biological Communities

Developed - 4.43 acres

Drainage ditch - 0.05 acre

Excavated stormwater basin - 0.16 acre

Intermittent Stream - 0.05 acre

Non-native annual grassland - 27.56 acres

Seasonal wetland - 0.12 acre

Data Disclaimer:
The 'Limit of Development' shown in this figure is based on an un-georeferenced CAD file. It has been adjusted by hand to align with aerial photos and therefore represents only approximate locations of impacts.

Figure 5. Impacts to Biological Communities

N W E S

0 200 400 800

Feet

wra
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Proposed Hale Avenue Extension
Santa Clara County, CA

Map Prepared Date: 3/15/2016
Map Prepared By: Fhourigan
Base Source: Esri Streaming - NAIP 2014
Data Source(s): WRA

Path: L:\Acad 2000 Files\21000\21059\GIS\ArcMap\FigX_Impacts_20160303.mxd

are potentially under the jurisdiction of the Corps under Section 404 of the Clean Water Act and under the jurisdiction of the RWQCB under the Porter-Cologne Act and Section 401 of the Clean Water Act. The intermittent stream is also potentially under the jurisdiction of CDFW under Section 1600-1616 of the CFGC. Potential mitigation measures for impacts to Corps and RWQCB jurisdictional wetlands, and intermittent stream are discussed in Section 6.2.

Nesting Birds and Burrowing Owl

Several common and special-status bird species (including burrowing owl) have potential to nest within and adjacent to the Study Area. The active nests of all native birds in California are protected by the federal MBTA and CFGC. Human and vehicle activity near a nest may result in abandonment of an active nest, eggs, and/or young, representing a potentially significant impact and a violation of the MBTA and CFGC.

Burrowing owls occupy underground burrows year-round. Ground disturbance at any time of the year can result in the entrapment of underground adults, as well as the entrapment abandonment of young during the nesting season. Take of eggs or young during the nesting season constitutes a potentially significant impact and a violation of the MBTA and CFGC. Take of adults is considered a potentially significant impact under CEQA.

6.2 Mitigation Measures

Sensitive Biological Communities

A jurisdictional wetland delineation is recommended for the aquatic features in the Study Area. Impacts to jurisdictional features would require permitting from multiple regulatory agencies. These permits would likely include:

- Section 404 Individual or Nationwide Permit from the Corps
- Section 401 Water Quality Certification from the RWQCB
- Section 1602 Streambed Alteration Agreement from CDFW
- Santa Clara Valley Habitat Plan Wetland Mitigation Fee

A Section 404 permit would require mitigation for impacts to jurisdictional wetlands and non-wetland waters. Required mitigation may include a mitigation and monitoring plan to ensure environmental impacts are mitigated and the sensitive habitats are returned to a natural state after the project is complete, or the payment of in-lieu wetland mitigation fees to the Habitat Plan. A mitigation and monitoring plan or payment of in-lieu wetland mitigation fees to the Habitat Plan would likely satisfy the Section 401 and Section 1602 permit mitigation requirements as well. In addition, the Section 401 and Section 1602 permits would require a certified CEQA document prior to issuance.

Nesting Birds

To avoid impacts to special-status birds and non-special-status native nesting birds in and adjacent to the Study Area, there are three potential mitigation measures, detailed below.

Measure 1: Vegetation Removal

To reduce potential nesting habitat in the Study Area, it is recommended that all vegetation scheduled for removal be cleared during the non-nesting season (September 1 through January 31) prior to grading. This will reduce suitable nesting habitat for many common species. Adjacent vegetation that has not been removed would be surveyed as discussed in Option 3 below.

Measure 2: Nesting Season Avoidance

To avoid impacts to nesting birds, initial vegetation removal or ground disturbance should be conducted between September 1 and January 31. Implementation of this mitigation measure will reduce potential impacts to breeding birds to a less than significant level.

Measure 3: Pre-construction Nesting Bird Surveys

During the avian nesting season (February 1 through August 31), a qualified biologist should conduct a nesting bird survey no more than 14 days prior to initial vegetation removal ground disturbance to determine if any birds are nesting on or adjacent to the Study Area. If active nests are found close enough to the Study Area to impact nesting success, the biologist will establish an appropriate exclusion zone around the nest. This exclusion zone may be modified depending upon the species, nest location, and existing visual or auditory buffers. Once all young have become independent of the nest, vegetation removal and ground disturbance may take place in the former exclusion zone. Implementation of this mitigation measure will reduce potential impacts to breeding birds to a less than significant level.

Tricolored Blackbird

Recommended mitigation measures for tricolored blackbird are nearly identical to those for nesting birds, and would only apply if emergent vegetation grows sufficiently to provide potential nesting habitat in the excavated stormwater basin. One approach to avoid impacts to nesting tricolored blackbirds is to remove any existing emergent vegetation suitable for tricolored blackbird nesting. Removal should occur outside of the nesting season (September 1 through January 31) and vegetation should be maintained such that it does not grow to a sufficient height and density to support nesting. Another approach would be to conduct all construction activities (including vegetation removal) outside of the nesting season.

If construction during the nesting season cannot be avoided, Section 6 of the Habitat Plan requires a pre-construction survey of any potential tricolored blackbird nesting habitat, concluding not more than two days prior to initial vegetation removal or ground disturbance. A preliminary survey may be additionally conducted up to 14 days prior to the start of construction. If nesting activity is observed, a 250-foot exclusion zone would be implemented around the active nesting area, and the appropriate wildlife agencies will be notified. The exclusion zone would remain in place until the colony abandons the site or the nesting season ends (beginning September 1).

Additionally, if the Project Area becomes suitable for nesting tricolored blackbird such that the species may be impacted by the project, consultation with CDFW may be required.

Burrowing Owl

The City of Morgan Hill's Citywide Plan requires compensatory mitigation for impacts to potential burrowing owl habitat. Other avoidance and minimization measures for burrowing owl will depend on the project proponents' decision whether or not to follow the Habitat Plan. No additional mitigation fees for burrowing would be required if the conditions of the Habitat Plan are adopted, as the Study Area is outside of the burrowing owl fee zone of the Habitat Plan. However, the City of Morgan Hill's fees would still apply.

Pre-construction surveys for burrowing owls should be conducted prior to conducting any site grading activities, and are required by both the Habitat Plan and the Citywide Plan. Survey protocols are similar between the Habitat Plan and the Citywide Plan, although the Citywide Plan requires a minimum of four pre-construction surveys while the Habitat Plan requires a minimum of two surveys. The Habitat Plan survey requirements are detailed below, and can be found in Section 6.6.1:

A minimum of two pre-construction burrowing owl surveys are required, with the first survey initiated no more than 14 days prior to grading initiation and the final survey concluded no more than two days prior to grading initiation. In the event that burrowing owls are discovered in the Study Area, a qualified biologist should delineate the extent of western burrowing owl habitat on the site, and additional avoidance measures should be implemented according to the Habitat Plan as follows, depending on whether owls are encountered during the non-nesting or nesting seasons:

- If the survey finds burrowing owls in or adjacent to the Study Area during the non-nesting season (September 1 through January 31), impacts to individuals may be avoided by establishing a 250-foot exclusion buffer between active burrows and any earth-moving activities or other disturbance in the Study Area. Construction activities outside of this 250-foot buffer would be allowed. Construction activities within the non-disturbance buffer would be allowed if: a qualified biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior and monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities. If there is any change in owl nesting and foraging behavior as a result of construction activities, these activities will cease within the 250-foot buffer. If the owls are gone for at least one week, the project proponent may request approval from the Santa Clara Valley Habitat Agency (Implementing Entity) that a qualified biologist excavate usable burrows to prevent owls from re-occupying the site. After all usable burrows are excavated, the buffer zone will be removed and construction may continue. Monitoring must continue as described above for the non-breeding season as long as the burrow remains active.

- If the survey finds burrowing owls in or adjacent to the Study Area during the nesting season (February 1 through August 31), all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance will include establishment of a 250-foot exclusion zone required between each nest burrow and any earth-moving activities or other disturbance in the Study Area. Construction may occur outside of the 250-foot non-disturbance buffer zone. Construction may occur inside of the 250-foot non-disturbance buffer during the breeding season if: the nest is not disturbed, and the project proponent develops an avoidance, minimization, and monitoring plan that will be reviewed by the

Santa Clara Valley Habitat Agency and the CDFW prior to project construction based on criteria set forth in the Habitat Plan. The exclusion zone can be removed once it is determined by a qualified biologist that the nest is abandoned prior to the end of the nesting season and the burrow is no longer in use by owls.

6.3 Additional Habitat Plan Mitigation Fees

As described above, the majority of the area mapped as non-native annual grassland within the Study Area is located within Land Cover Fee Zone B (Agriculture and Valley Floor Lands) of the Habitat Plan and a Land Cover development fee may apply to portions of the Project which are within this Fee Zone. The excavated stormwater basin in the northern portion of the Study Area is also mapped as a Pond Wetland Fee Zone, and additional wetland fees may apply if this feature is impacted by the Project.

7.0 REFERENCES

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. The Jepson Manual: Vascular Plants of California, second edition. University of California Press, Berkeley, CA.

Bousman, William G. 2007. Breeding Bird Atlas of Santa Clara County. Santa Clara Audubon Society, Cupertino, CA.

Brown, B.T. 1993. Bell's Vireo (*Vireo bellii*). In: Poole, A. and F. Gill, eds. The Birds of North America, No. 35. The Academy of Natural Sciences, Philadelphia, and the American Ornithologists' Union, Washington, D.C.

[CDFG] California Department of Fish and Game. 2003, 2007, 2009. List of Vegetation Alliances and Associations. Vegetation Classification and Mapping Program. Sacramento, California. Online at http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp. Accessed: January 2016.

[CDFG] California Department of Fish and Game. 2012. Staff Report on Burrowing Owl Mitigation. March 7.

[CDFG] California Department of Fish and Game. 1994. Environmental Services Division (ESD). A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1607, California Fish and Game Code.

[CDFW] California Department of Fish and Wildlife. 2016a. California Natural Diversity Database (CNDDB). California Department of Fish and Wildlife. Biogeographic Data Branch, Vegetation Classification and Mapping Program, Sacramento, CA. Accessed: January 2016.

[CDFW] California Department of Fish and Wildlife. 2016b. Background on the List of Vegetation Alliances and Associations (Natural Communities List), “Addressing High Priority Vegetation Types”. Biogeographic Data Branch. Sacramento, CA. Available online at: https://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_background.asp. Accessed January 2016.

[CDFW] California Department of Fish and Wildlife. 2016c. California Wildlife Life History Accounts and Range Maps. Online at: https://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx. Accessed: February 2016.

[CNPS] California Native Plant Society. 2016a. A Manual of California Vegetation, Online Edition. California Native Plant Society, Sacramento, CA. Available at: http://www.cnps.org/cnps/vegetation/ Accessed: January 2016.

[CNPS] California Native Plant Society. 2016a. Inventory of Rare and Endangered Plants. California Native Plant Society, Sacramento, California. Available at: www.cnps.org/inventory. Accessed: January 2016.

Cicero, C. 2000. Oak Titmouse (*Baeolophus inornatus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/485a

City of Morgan Hill. 2003. Citywide Burrowing Owl Habitat Mitigation Plan. June.

[CCH] Consortium of California Herbaria. 2016. Data provided by the participants of the Consortium of California Herbaria. Online at: http://ucjeps.berkeley.edu/consortium. Accessed January 2016.

Dunk, J. R. 1995. White-tailed Kite (Elanus leucurus). In The Birds of North America, No. 178 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.

eBird. 2016. eBird: An online database of bird distribution and abundance. eBird, Cornell Lab of Ornithology, Ithaca, New York. Online at: http://www.ebird.org. Accessed: February 2016.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Department of the Army, Waterways Experiment Station, Vicksburg, MS. 39180-0631.

Google Earth. 2016. Aerial Imagery 1993-2015. Accessed February 2016.

Hamilton III, WJ and RJ Meese. 2006. Habitat and population characteristics of Tricolored Blackbird colonies in California. 2005 final report. U.C. Davis for California Department. of Fish and Game.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Prepared for the California Department of Fish and Game, Sacramento, CA.

[ICFI] ICF International. 2012. Final Santa Clara Valley Habitat Plan. Report prepared for the City of Gilroy, City of Morgan Hill, City of San Jose, County of Santa Clara, Santa Clara Valley Transportation Authority, and Santa Clara Valley Water District.

Jennings, MR and MP Hayes. 1994. Amphibian and reptile species of special concern in California. Final Report to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA. 225 pp.

Jepson Flora Project (eds.). 2014. Jepson eFlora. Online at: http://ucjeps.berkeley.edu/IJM.html. Accessed February 2016.

Koenig, M. and M. D. Reynolds. 2009. Yellow-billed Magpie (*Pica nuttalli*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/180

Kus, B.E. and K.L. Miner. 1989. Use of Non-riparian Habitats by Least Bell's Vireos. USDA Forest Service Gen. Tech. Rep. PSW-110, 299-303.

Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. The National Wetland Plant List: 2014 Update of Wetland Ratings. Phytoneuron 2014-41: 1-42

Lowther, Peter E. 2000. Nuttall's Woodpecker (*Picoides nuttallii*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online:http://bna.birds.cornell.edu/bna/species/555

Mark Thomas & Company, Inc. 2012. Improvement Plans for Hale Avenue Extension Project, 90 Percent Submittal. Prepared for City of Morgan Hill Public Works Department. July 20.

Meese, R.J., E.C. Beedy and W.J. Hamilton, III. 2014. Tricolored Blackbird (Agelaius tricolor), The Birds of North America Online (A Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/423.

Natural Resources Conservation Service (NRCS). 2010. Field Indicators of Hydric Soils in the United States, version 7.0. L.M. Vasilas, G.W. Hurt, C.V. Noble, eds. USDA, NRCS in cooperation with the National Technical Committee for Hydric Soils, Fort Worth, TX.

NatureServe. 2014. NatureServe Conservation Status. Available at: http://www.natureserve.org/explorer/ranking

Poulin, Ray, L. D. Todd, E. A. Haug, B. A. Millsap and M. S. Martell. 2011. Burrowing Owl (Athene cunicularia), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/061doi:10.2173/bna.61

Santa Clara Valley Habitat Agency Geobrowser. 2016. Online mapping tool for Santa Clara Valley Habitat Plan. Online: http://www.hcpmaps.com/habitat/. Accessed February 2016.

Shuford, W.D., and Gardali, T., eds. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, CA and CDFG, Sacramento, CA.

[Corps] U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). U.S. Army Corps of Engineers Research and Development Center, Vicksburg, MS.

[USDA] U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 2016. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/

[USFWS] U.S. Fish and Wildlife Service. 2016a. National Wetlands Inventory website. U.S. Department of the Interior, USFWS, Washington D.C. Online at: http://www.fws.gov/nwi. Accessed January 2016.

[USFWS] U.S. Fish and Wildlife Service. 2016b. IPaC Trust Report. Information for Planning and Conservtaiton. Sacramento Fish and Wildlife Service.

[USFWS] U.S. Fish and Wildlife Service. 2006. Least Bell's Vireo (*Vireo bellii pusillus*) 5-Year Review Summary and Evaluation. U.S. Fish and Wildlife Service, Carlsbad, CA. September.

[USFWS] U.S. Fish and Wildlife Service. 1998. Draft Recovery Plan for the Least Bell's Vireo. U.S. Fish and Wildlife Service, Portland, OR. 139 pp.

[USGS] U.S. Geological Survey. 1917. Morgan Hill 15-minute quadrangle.

[USGS] U.S. Geological Survey. 1980. Morgan Hill 7.5-minute quadrangle.

[USGS] U.S. Geological Survey. 1994. Mount Madonna 7.5-minute quadrangle.

Vickery, Peter D. 1996. Grasshopper Sparrow (*Ammodramus savannarum*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/239

[WRA] WRA, Inc.). 2011. Draft Biological Resources Assessment, Hale Avenue Extension Project. Prepared for David J. Powers & Associates, Inc., 1871 The Alameda, Suite 200, San José, California 95126.

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APPENDIX A

LIST OF OBSERVED PLANT AND WILDLIFE SPECIES

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Appendix A-1. Plant Species Observed in the Study Area on February 5, 2016.

Family	Scientific Name	Common Name	Phenology	Origin	Rare Status	Invasive Status (Cal-IPC 2006)
Anacardiaceae	*Pistacia chinensis*	Chinese pistache	tree	non-native	-	-
Apocynaceae	*Asclepias fascicularis*	Milkweed	perennial herb	native	-	-
Apocynaceae	*Nerium oleander*	Oleander	tree	non-native (invasive)	-	-
Asteraceae	*Baccharis pilularis*	Coyote brush	shrub	native	-	-
Asteraceae	*Baccharis salicifolia* ssp. *salicifolia*	Mule fat	shrub	native	-	-
Asteraceae	*Centaurea solstitialis*	Yellow starthistle	annual herb	non-native (invasive)	-	High
Asteraceae	*Cichorium intybus*	Chicory	perennial herb	non-native	-	-
Asteraceae	*Dittrichia graveolens*	Stinkwort	annual herb	non-native (invasive)	-	Moderate
Asteraceae	*Erigeron bonariensis*	Flax-leaved horseweed	annual herb	non-native	-	-
Asteraceae	*Helminthotheca echioides*	Bristly ox-tongue	annual, perennial herb	non-native (invasive)	-	-
Asteraceae	*Holozonia filipes*	Holozonia	perennial herb	native	-	-
Asteraceae	*Hypochaeris glabra*	Smooth cats ear	annual herb	non-native (invasive)	-	Limited

Family	Scientific Name	Common Name	Phenology	Origin	Rare Status	Invasive Status (Cal-IPC 2006)
Asteraceae	*Hypochaeris radicata*	Hairy cats ear	perennial herb	non-native (invasive)	-	Moderate
Asteraceae	*Lactuca serriola*	Prickly lettuce	annual herb	non-native (invasive)	-	-
Boraginaceae	*Amsinckia intermedia*	Common fiddleneck	annual herb	native	-	-
Brassicaceae	*Brassica rapa*	Common mustard	annual herb	non-native (invasive)	-	Limited
Brassicaceae	*Capsella bursa-pastoris*	Shepherd's purse	annual herb	non-native	-	-
Brassicaceae	*Cardamine oligosperma*	Idaho bittercress	annual, perennial herb	native	-	-
Brassicaceae	*Hirschfeldia incana*	Mustard	perennial herb	non-native (invasive)	-	Moderate
Brassicaceae	*Raphanus sativus*	Jointed charlock	annual, biennial herb	non-native (invasive)	-	Limited
Convolvulaceae	*Convolvulus arvensis*	Field bindweed	perennial herb, vine	non-native (invasive)	-	-
Cupressaceae	*Calocedrus decurrens*	Incense cedar	tree	native	-	-
Cyperaceae	*Cyperus eragrostis*	Tall cyperus	perennial grasslike herb	native	-	-
Cyperaceae	*Schoenoplectus californicus*	California bulrush	perennial grasslike herb	native	-	-
Fabaceae	*Acacia dealbata*	Silver wattle	tree, shrub	non-native (invasive)	-	Moderate

Family	Scientific Name	Common Name	Phenology	Origin	Rare Status	Invasive Status (Cal-IPC 2006)
Fabaceae	*Acacia decurrens*	Green wattle	tree	non-native	-	-
Fabaceae	*Lotus corniculatus*	Bird's foot trefoil	perennial herb	non-native (invasive)	-	-
Fabaceae	*Lupinus* sp.	annual lupine	annual herb	native	-	-
Fabaceae	*Medicago polymorpha*	California burclover	annual herb	non-native (invasive)	-	Limited
Fagaceae	*Quercus agrifolia*	Coast live oak	tree	native	-	-
Fagaceae	*Quercus lobata*	Valley oak	tree	native	-	-
Geraniaceae	*Erodium cicutarium*	Coastal heron's bill	annual herb	non-native (invasive)	-	Limited
Geraniaceae	*Geranium molle*	Crane's bill geranium	annual, perennial herb	non-native (invasive)	-	-
Hamamelidaceae	*Liquidambar styraciflua*	American sweetgum	tree	non-native	-	-
Juglandaceae	*Juglans* sp.	Walnut	tree	-	-	-
Juncaceae	*Juncus acutus*	spiny rush	perennial grasslike herb	native	-	-
Juncaceae	*Juncus xiphioides*	Iris leaved rush	perennial grasslike herb	native	-	-
Lauraceae	*Cinnamomum camphora*	Camphortree	tree	non-native	-	-

Family	Scientific Name	Common Name	Phenology	Origin	Rare Status	Invasive Status (Cal-IPC 2006)
Malvaceae	*Malva neglecta*	Dwarf mallow	annual, perennial herb	non-native	-	-
Malvaceae	*Malva* sp.	Mallow	annual herb	non-native	-	-
Montiaceae	*Claytonia perfoliata*	Miner's lettuce	annual herb	native	-	-
Montiaceae	*Calandrinia menziesii*	Red maids	annual herb	native	-	-
Oleaceae	*Ligustrum lucidum*	Glossy privet	tree, shrub	non-native (invasive)	-	-
Onagraceae	*Epilobium campestre*	Smooth boisduvalia	annual herb	native	-	-
Onagraceae	*Epilobium ciliatum*	Slender willow herb	perennial herb	native	-	-
Papaveraceae	*Eschscholzia californica*	California poppy	annual, perennial herb	native	-	-
Pinaceae	*Pinus radiata*	Monterey pine	tree	native	Rank 1B.1*	Assessed
Plantaginaceae	*Plantago lanceolata*	Ribwort	perennial herb	non-native (invasive)	-	Limited
Platanaceae	*Platanus racemosa*	California sycamore	tree	native	-	-
Poaceae	*Avena barbata*	Slim oat	annual, perennial grass	non-native (invasive)	-	Moderate
Poaceae	*Bromus diandrus*	Ripgut brome	annual grass	non-native (invasive)	-	Moderate

Family	Scientific Name	Common Name	Phenology	Origin	Rare Status	Invasive Status (Cal-IPC 2006)
Poaceae	*Crypsis schoenoides*	Swamp grass	annual grass	non-native	-	-
Poaceae	*Cynodon dactylon*	Bermuda grass	perennial grass	non-native (invasive)	-	Moderate
Poaceae	*Festuca myuros*	Rattail sixweeks grass	annual grass	non-native (invasive)	-	-
Poaceae	*Festuca perennis*	Italian rye grass	annual, perennial grass	non-native	-	-
Poaceae	*Holcus lanatus*	Common velvetgrass	perennial grass	non-native (invasive)	-	Moderate
Poaceae	*Hordeum marinum ssp. gussoneanum*	Barley	annual grass	non-native	-	-
Poaceae	*Hordeum murinum*	Foxtail barley	annual grass	non-native (invasive)	-	-
Poaceae	*Paspalum* sp.	Dallis grass	perennial grass	non-native	-	-
Poaceae	*Polypogon monspeliensis*	Annual beard grass	annual grass	non-native (invasive)	-	Limited
Poaceae	*Stipa miliacea* var. *miliacea*	Smilo grass	annual grass	non-native	-	Limited
Polygonaceae	*Polygonum aviculare* ssp. *depressum*	Prostrate knotweed	annual, perennial herb	non-native	-	-
Polygonaceae	*Rumex crispus*	Curly dock	perennial herb	non-native (invasive)	-	Limited
Rosaceae	*Heteromeles arbutifolia*	Toyon	shrub	native	-	-

Family	Scientific Name	Common Name	Phenology	Origin	Rare Status	Invasive Status (Cal-IPC 2006)
Rosaceae	*Malus* sp.	Apple	tree	non-native	-	-
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	shrub	non-native (invasive)	-	High
Rubiaceae	*Galium aparine*	Cleavers	annual herb	native	-	-
Salicaceae	*Populus nigra*	Lombardy poplar	tree	non-native	-	-
Viscaceae	*Phoradendron* sp.	Mistletoe	shrub	native	-	-

*Rarity status only applies to native stands at Ano Nuevo, Cambria and the Monterey Peninsula (CNPS 2016b). This species has been widely introduced elsewhere and is considered invasive outside of its native range (Cal-IPC 2006)

Appendix A-2. Wildlife Species Observed in the Study Area on January 29 and February 5, 2016

Common Name	**Scientific Name**
MAMMALS	
California ground squirrel	*Otospermophilus beecheyi*
BIRDS	
American robin	*Turdus migratorius*
Anna's hummingbird	*Calypte anna*
black phoebe	*Sayornis nigricans*
brewer's blackbird	*Euphagus cyanocephalus*
Canada goose (flyover)	*Branta canadensis*
California towhee	*Melozone crissalis*
European starling	*Sturnus vulgaris*
house finch	*Haemorhous mexicanus*
mallard	*Anas platyrhynchos*
mourning dove	*Zenaida macroura*
northern mockingbird	*Mimus polyglottos*
red-winged blackbird	*Agelaius phoeniceus*
rock pigeon	*Columba livia*
turkey vulture	*Cathartes aura*
western scrub jay	*Aphelocoma californica*
white-crowned sparrow	*Zonotrichia leucophrys*

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APPENDIX B

POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR IN THE STUDY AREA

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Appendix B-1. Potential for special-status plant species to occur in the Study Area. . List compiled from a search of the California Department of Fish and Wildlife Natural Diversity Database (CDFW 2016a), and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2016b) for the Mt. Madonna, Gilroy, Loma Prieta, Santa Teresa Hills, Morgan Hill and Mt. Sizer USGS 7.5' quadrangles.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Plants				
Santa Clara thorn-mint *Acanthomintha lanceolata*	Rank 4.2	Chaparral (often serpentine), cismontane woodland, coastal scrub/rocky. Elevation ranges from 260 to 3940 feet (80 to 1200 meters). Blooms Mar-Jun.	**No Potential.** No suitable habitat or serpentine substrate requisite for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.
California androsace *Androsace elongata ssp. acuta*	Rank 4.2	Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland. Elevation ranges from 490 to 3940 feet (150 to 1200 meters). Blooms Mar-Jun.	**Unlikely.** Grasslands in Study Area are highly disturbed, and unlikely to host this species.	No further surveys or avoidance measures are recommended.
Anderson's manzanita *Arctostaphylos andersonii*	Rank 1B.2	Broadleafed upland forest, chaparral, north coast coniferous forest/openings, edges. Elevation ranges from 200 to 2490 feet (60 to 760 meters). Blooms Nov-May.	**Not Present.** No suitable habitat for this species occurs within the Study Area, and this species was not observed during the site visit.	No further surveys or avoidance measures are recommended.
big-scale balsamroot *Balsamorhiza macrolepis*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland/sometimes serpentine. Elevation ranges from 300 to 5100 feet (90 to 1555 meters). Blooms Mar-Jun.	**Unlikely.** Grasslands in Study Area are highly disturbed, unlikely to host this species.	No further surveys or avoidance measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Plants				
Santa Cruz Mountains pussypaws *Calyptridium parryi var. hesseae*	Rank 1B.1	Chaparral, cismontane woodland/sandy or gravelly, openings. Elevation ranges from 1000 to 5020 feet (305 to 1530 meters). Blooms May-Aug.	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.
South Coast Range morning-glory *Calystegia collina ssp. venusta*	Rank 4.3	Chaparral, cismontane woodland, valley and foothill grassland/serpentine or sedimentary. Elevation ranges from 1390 to 4890 feet (425 to 1490 meters). Blooms Apr-Jun.	**No Potential.** No suitable habitat or serpentine substrate requisite for this species occurs within the Study Area. The Study Area is well below the documented elevation range for this species.	No further surveys or avoidance measures are recommended.
Tiburon paintbrush *Castilleja affinis var. neglecta*	FE, ST, Rank 1B.2, SCVHCP	Valley and foothill grassland (serpentine). Elevation ranges from 200 to 1310 feet (60 to 400 meters). Blooms Apr-Jun.	**No Potential.** No serpentine substrate in Study Area; grasslands in Study Area are highly disturbed.	No further surveys or avoidance measures are recommended.
pink creamsacs *Castilleja rubicundula var. rubicundula*	Rank 1B.2	Chaparral (openings), cismontane woodland, meadows and seeps, valley and foothill grassland/serpentine. Elevation ranges from 70 to 2990 feet (20 to 910 meters). Blooms Apr-Jun.	**No Potential.** No serpentine soils in Study Area; grasslands in Study Area are highly disturbed.	No further surveys or avoidance measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Plants				
Coyote ceanothus *Ceanothus ferrisiae*	FE, Rank 1B.1, SCVHCP	Chaparral, coastal scrub, valley and foothill grassland/serpentine. Elevation ranges from 390 to 1510 feet (120 to 460 meters). Blooms Jan-May.	**Not Present.** No serpentine soils in Study Area. Species not observed during site visit.	No further surveys or avoidance measures are recommended.
Congdon's tarplant *Centromadia parryi ssp. congdonii*	Rank 1B.1	Valley and foothill grassland (alkaline). Elevation ranges from 0 to 750 feet (0 to 230 meters). Blooms May-Oct (Nov).	**Unlikely.** No alkaline soils occur within the Study Area.	No further surveys or avoidance measures are recommended.
Douglas' spineflower *Chorizanthe douglasii*	Rank 4.3	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland/sandy or gravelly. Elevation ranges from 180 to 5250 feet (55 to 1600 meters). Blooms Apr-Jul.	**Unlikely.** Though gravelly soils are present, grasslands in Study Area are highly disturbed, unlikely to host this species.	No further surveys or avoidance measures are recommended.
Monterey spineflower *Chorizanthe pungens var. pungens*	FT, Rank 1B.2	Chaparral (maritime), cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland/sandy. Elevation ranges from 10 to 1480 feet (3 to 450 meters). Blooms Apr-Jun (Jul), (Aug).	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Plants				
Mt. Hamilton fountain thistle *Cirsium fontinale var. campylon*	Rank 1B.2, SCVHCP	Chaparral, cismontane woodland, valley and foothill grassland/serpentine seeps. Elevation ranges from 330 to 2920 feet (100 to 890 meters). Blooms (Feb), Apr-Oct.	**No Potential.** No serpentine soils or seeps occur in Study Area.	No further surveys or avoidance measures are recommended.
Brewer's clarkia *Clarkia breweri*	Rank 4.2	Chaparral, cismontane woodland, coastal scrub/often serpentine. Elevation ranges from 710 to 3660 feet (215 to 1115 meters). Blooms Apr-Jun.	**No Potential.** No suitable habitat or serpentine substrate requisite for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.
Santa Clara red ribbons *Clarkia concinna ssp. automixa*	Rank 4.3	Chaparral, cismontane woodland. Elevation ranges from 300 to 4920 feet (90 to 1500 meters). Blooms (Apr), May-Jun (Jul).	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.
San Francisco collinsia *Collinsia multicolor*	Rank 1B.2	Closed-cone coniferous forest, coastal scrub/sometimes serpentine. Elevation ranges from 100 to 820 feet (30 to 250 meters). Blooms (Feb), Mar-May.	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.
Rattan's cryptantha *Cryptantha rattanii*	Rank 4.3	Cismontane woodland, riparian woodland, valley and foothill grassland. Elevation ranges from 800 to 3000 feet (245 to 915 meters). Blooms Apr-Jul.	**No Potential.** No suitable habitat for this species occurs within the Study Area. Grasslands within the Study Area are highly disturbed.	No further surveys or avoidance measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Plants				
clustered lady's-slipper *Cypripedium fasciculatum*	Rank 4.2	Lower montane coniferous forest, north coast coniferous forest/usually serpentine seeps and streambanks. Elevation ranges from 330 to 7990 feet (100 to 2435 meters). Blooms Mar-Aug.	**No Potential.** No suitable habitats or serpentine substrates requisite for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.
Santa Clara Valley dudleya *Dudleya abramsii ssp. setchellii*	FE, Rank 1B.1, SCVHCP	Cismontane woodland, valley and foothill grassland/serpentine, rocky. Elevation ranges from 200 to 1490 feet (60 to 455 meters). Blooms Apr-Oct.	**No Potential.** No serpentine outcrops occur in Study Area.	No further surveys or avoidance measures are recommended.
California bottle-brush grass *Elymus californicus*	Rank 4.3	Broadleafed upland forest, cismontane woodland, north coast coniferous forest, riparian woodland. Elevation ranges from 50 to 1540 feet (15 to 470 meters). Blooms May-Aug (Nov).	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.
Hoover's button-celery *Eryngium aristulatum var. hooveri*	Rank 1B.1	Vernal pools. Elevation ranges from 10 to 150 feet (3 to 45 meters). Blooms (Jun), Jul (Aug).	**Unlikely.** While wetlands and clay soils are present, the Study Area is highly disturbed and does not represent typical habitat for this species.	No further surveys or avoidance measures are recommended.
fragrant fritillary *Fritillaria liliacea*	Rank 1B.2, SCVHCP	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland/often serpentine. Elevation ranges from 10 to 1350 feet (3 to 410 meters). Blooms Feb-Apr.	**Unlikely.** No serpentine soils in Study Area; grasslands in Study Area are highly disturbed and unlikely to host this species.	No further surveys or avoidance measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Plants				
phlox-leaf serpentine bedstraw *Galium andrewsii ssp. gatense*	Rank 4.2	Chaparral, cismontane woodland, lower montane coniferous forest/serpentine, rocky. Elevation ranges from 490 to 4760 feet (150 to 1450 meters). Blooms Apr-Jul.	**No Potential.** No suitable habitat or serpentine substrates requisite for this species occur within the Study Area.	No further surveys or avoidance measures are recommended.
serpentine sunflower *Helianthus exilis*	Rank 4.2	Chaparral, cismontane woodland/serpentine seeps. Elevation ranges from 490 to 5000 feet (150 to 1525 meters). Blooms Jun-Nov.	**No Potential.** No suitable habitats or serpentine substrates requisite for this species occur within the Study Area.	No further surveys or avoidance measures are recommended.
Loma Prieta hoita *Hoita strobilina*	Rank 1B.1, SCVHCP	Chaparral, cismontane woodland, riparian woodland/usually serpentine, mesic. Elevation ranges from 100 to 2820 feet (30 to 860 meters). Blooms May-Jul (Aug), (Oct).	**No Potential.** No suitable habitats or serpentine substrates requisite for this species occur within the Study Area.	No further surveys or avoidance measures are recommended.
Santa Cruz Tarplant *Holocarpha macradenia*	FT; CE; Rank 1B.1	Coastal prairie, coastal scrub, valley and foothill grassland often on clay, sandy soils. Elevation ranges from 30-660 feet (10 to 220 meters) Blooms June-October	**Unlikely**. Grasslands in Study Area are highly disturbed; species is restricted to coastal influenced areas west of Santa Cruz mountains.	No further surveys or avoidance measures are recommended.
legenere *Legenere limosa*	Rank 1B.1	Vernal pools. Elevation ranges from 0 to 2890 feet (1 to 880 meters). Blooms Apr-Jun.	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Plants				
bristly leptosiphon *Leptosiphon acicularis*	Rank 4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 180 to 4920 feet (55 to 1500 meters). Blooms Apr-Jul.	**Unlikely.** Grasslands in Study Area are highly disturbed, unlikely to host this species	No further surveys or avoidance measures are recommended.
serpentine leptosiphon *Leptosiphon ambiguus*	Rank 4.2	Cismontane woodland, coastal scrub, valley and foothill grassland/usually serpentine. Elevation ranges from 390 to 3710 feet (120 to 1130 meters). Blooms Mar-Jun.	**Unlikely.** Grasslands in Study Area are highly disturbed, unlikely to host this species; no serpentine soils in Study Area.	No further surveys or avoidance measures are recommended.
large-flowered leptosiphon *Leptosiphon grandiflorus*	Rank 4.2	Coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland/usually sandy. Elevation ranges from 20 to 4000 feet (5 to 1220 meters). Blooms Apr-Aug.	**Unlikely.** Grasslands in Study Area are highly disturbed, unlikely to host this species; no sandy soils in Study Area.	No further surveys or avoidance measures are recommended.
woolly-headed lessingia *Lessingia hololeuca*	Rank 3	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland/clay, serpentine. Elevation ranges from 50 to 1000 feet (15 to 305 meters). Blooms Jun-Oct.	**Unlikely.** Grasslands in Study Area are highly disturbed, unlikely to host this species; no serpentine soils in Study Area.	No further surveys or avoidance measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Plants				
smooth lessingia *Lessingia micradenia var. glabrata*	Rank 1B.2, SCVHCP	Chaparral, cismontane woodland/serpentine, often roadsides. Elevation ranges from 390 to 1380 feet (120 to 420 meters). Blooms (May), (Jun), Jul-Nov.	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.
arcuate bush-mallow *Malacothamnus arcuatus*	Rank 1B.2	Chaparral, cismontane woodland. Elevation ranges from 50 to 1160 feet (15 to 355 meters). Blooms Apr-Sep.	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.
Hall's bush-mallow *Malacothamnus hallii*	Rank 1B.2	Chaparral, coastal scrub. Elevation ranges from 30 to 2490 feet (10 to 760 meters). Blooms May-Sep (Oct).	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.
woodland woolythreads *Monolopia gracilens*	Rank 1B.2	Broadleafed upland forest (openings), chaparral (openings), cismontane woodland, north coast coniferous forest (openings), valley and foothill grassland/serpentine. Elevation ranges from 330 to 3940 feet (100 to 1200 meters). Blooms (Feb), Mar-Jul.	**No Potential.** No serpentine soils are present in Study Area.	No further surveys or avoidance measures are recommended.
Santa Cruz Mountains beardtongue *Penstemon rattanii var. kleei*	Rank 1B.2	Chaparral, lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 1310 to 3610 feet (400 to 1100 meters). Blooms May-Jun.	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Plants				
rock sanicle *Sanicula saxatilis*	SR, Rank 1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland/rocky. Elevation ranges from 2030 to 3850 feet (620 to 1175 meters). Blooms Apr-May.	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.
Metcalf Canyon jewelflower *Streptanthus albidus ssp. albidus*	FE, Rank 1B.1, SCVHCP	Valley and foothill grassland (serpentine). Elevation ranges from 150 to 2620 feet (45 to 800 meters). Blooms Apr-Jul.	**No Potential.** No serpentine soils are present in Study Area.	No further surveys or avoidance measures are recommended.
most beautiful jewelflower *Streptanthus albidus ssp. peramoenus*	Rank 1B.2, SCVHCP	Chaparral, cismontane woodland, valley and foothill grassland/serpentine. Elevation ranges from 310 to 3280 feet (95 to 1000 meters). Blooms (Mar), Apr-Sep (Oct).	**No Potential.** No serpentine soils are present in Study Area.	No further surveys or avoidance measures are recommended.
Mt. Hamilton jewelflower *Streptanthus callistus*	Rank 1B.3	Chaparral, cismontane woodland. Elevation ranges from 1970 to 2590 feet (600 to 790 meters). Blooms Apr-May.	**No Potential.** No suitable habitat for this species occurs within the Study Area. The Study Area is well below the documented elevation range of this species.	No further surveys or avoidance measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Plants				
two-fork clover *Trifolium amoenum*	FE, Rank 1B.1	Coastal bluff scrub, valley and foothill grassland (sometimes serpentine). Elevation ranges from 20 to 1360 feet (5 to 415 meters). Blooms Apr-Jun.	**Unlikely.** Grasslands in Study Area are highly disturbed, unlikely to support this species; no serpentine soils are present in Study Area.	No further surveys or avoidance measures are recommended.
Santa Cruz clover *Trifolium buckwestiorum*	Rank 1B.1	Broadleafed upland forest, cismontane woodland, coastal prairie/gravelly, margins. Elevation ranges from 340 to 2000 feet (105 to 610 meters). Blooms Apr-Oct.	**No Potential.** No suitable habitat for this species occurs within the Study Area.	No further surveys or avoidance measures are recommended.

* Key to status codes:

BCC	USFWS Birds of Conservation Concern
CFP	CDFW Fully Protected Animal
EPA	Eagle Protection Act Species
FD	Federal Delisted
FE	Federal Endangered
FT	Federal Threatened
NMFS	Species under the Jurisdiction of the NMFS
SCVHCP	Santa Clara Valley Habitat Plan Covered Species
SC	Candidate for State Listing
SD	State Delisted
SE	State Endangered
ST	State Threatened
SSC	CDFW Species of Special Concern
SSI	CDFW Special-Status Invertebrate
WBWG	Western Bat Working Group (High or Medium) Priority species
Rank 1A	CRPR Rank 1A: Presumed extirpated in California and either rare or extinct elsewhere

Rank 1B	CRPR Rank 1B: Plants rare, threatened or endangered in California and elsewhere
Rank 2B	CRPR Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3	CRPR Rank 3: Plants about which CNPS needs more information (a review list)

Species Evaluations:
See evaluation definitions in Section 3.2.2 of the report.

Appendix B-2. Potential for special-status wildlife species to occur in the Study Area. List compiled from the U.S. Fish and Wildlife Service (USFWS) Species Lists (2016), and California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2016a) for the Mt. Madonna, Gilroy, Loma Prieta, Santa Teresa Hills, Morgan Hill and Mt. Sizer USGS 7.5' quadrangles, a review of historical and current satellite imagery via Google Earth (2016) and a review of other CDFW lists, and publications (Shuford and Gardali 2008, Jennings and Hayes 1994, CDFW 2016c).

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Mammals				
pallid bat *Antrozous pallidus*	SSC, WBWG	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roost sites include old ranch buildings, rocky outcrops and caves within sandstone outcroppings. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Unlikely.** Trees within the Study Area are generally too small and lack cavities or exfoliating bark to support roosting, and the Study Area is situated within an area of human development. This species may occasionally pass through or forage within the Study Area, but it is unlikely to roost there.	No further action recommended.
Townsend's big-eared bat *Corynorhinus townsendii*	SSC, WBWG	Lives in a wide variety of habitats but most common in mesic sites. Day roosts highly associated with caves and mines. Need appropriate roosting, maternity, and hibernacula sites free from human disturbance.	**Unlikely.** Typical isolated cavern or building roost habitat is not present in the Study Area, but this species may occasionally pass through or forage within the Study Area.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
western red bat *Lasiurus blossevillii*	SSC, WBWG	This species is highly migratory and is typically solitary, roosting primarily in the foliage of trees or shrubs. It is associated with broad-leaved tree species including cottonwoods, sycamores, alders, and maples. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.	**Unlikely.** This species is typically associated with large broad-leaved trees in riparian areas, and the landscape trees within and adjacent to the Study Area are poor roosting habitat. This species may occasionally pass through or forage within the Study Area.	No further action recommended.
western mastiff bat *Eumops perotis*	SSC, WBWG	Found in a wide variety of open, arid and semi-arid habitats. Distribution appears to be tied to large rock structures which provide suitable roosting sites, including cliff crevices and cracks in boulders.	**Unlikely.** Typical cliff and boulder roost habitat is not present in the Study Area, but this species may occasionally pass through or forage within the Study Area.	No further action recommended.
fringed myotis *Myotis thysanodes*	WBWG	Associated with a wide variety of habitats including dry woodlands, desert scrub, mesic coniferous forest, grassland, and sage-grass steppes. Buildings, mines and large trees and snags are important day and night roosts.	**Unlikely.** Typical forested or woodland roost habitat is not present in the Study Area, but this species may occasionally pass through or forage within the Study Area.	No further action recommended.
long-eared myotis *Myotis evotis*	WBWG	Occurs in semiarid shrublands, sage, chaparral, and agricultural areas, but is usually associated with coniferous forests from seal level to 9000 feet. Individuals roost under exfoliating tree bark, and in hollow trees, caves, mines, cliff crevices, and rocky outcrops on the ground. They also sometimes roost in buildings and under bridges.	**Unlikely.** Typical forested roost habitat is not present in the Study Area, but this species may occasionally pass through or forage within the Study Area.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
long-legged myotis *Myotis volans*	WBWG	Primarily found in coniferous forests, but also occurs seasonally in riparian and desert habitats. Large hollow trees, rock crevices and buildings are important day roosts. Other roosts include caves, mines and buildings.	**Unlikely.** Typical forested roost habitat is not present in the Study Area, but this species may occasionally pass through or forage within the Study Area.	No further action recommended.
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	SSC	Forest habitats of moderate canopy and moderate to dense understory. Also in chaparral habitats. Constructs large nests of twigs. May be limited by availability of nest-building materials.	**No Potential**. The Study Area is outside this subspecies' range, and the site does not contain habitat with a continuous canopy.	No further action recommended.
American badger *Taxidea taxus*	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**Unlikely**. No den sites were observed during the site visit. The Study Area has been surrounded by urban development for at least 20 years, and its relatively small size and adjacent human disturbance likely precludes presence (Google Earth 2016).	No further action recommended.
San Joaquin kit fox *Vulpes macrotis mutica*	FE, ST, SCVHP	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	**No Potential**. Outside of current range. Although numerous potential den habitat, isolation of Study Area within development precludes presence.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Birds				
white-tailed kite *Elanus leucurus*	CFP	Year-long resident of coastal and valley lowlands; rarely found away from agricultural areas. Preys on small diurnal mammals and occasional birds, insects, reptiles, and amphibians.	**Moderate Potential**. This species is common in the Santa Clara Valley, and the Study Area provides open foraging habitat and trees suitable for nesting, although adjacent human disturbance may reduce nesting potential (eBird 2016).	Pre-construction nesting bird surveys as described in Section 6.2.
golden eagle *Aquila chrysaetos*	BCC, CFP, EPA	Rolling foothills mountain areas, sage-juniper flats, desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**Unlikely**. Documented sightings at Anderson Lake several miles north of the Study Area (eBird 2011). No nesting habitat due to surrounding urbanization. Potential foraging habitat north of West Dunne Avenue.	No further action recommended.
bald eagle *Haliaeetus leucocephalus*	FD, SE, CFP, BCC, EPA	Occurs year-round in California, but primarily a winter visitor. Nests in large trees in the vicinity of larger lakes, reservoirs and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish.	**Unlikely.** Occasionally observed in Santa Clara Valley (eBird 2016). This species is typically associated with reservoirs or other large bodies of water, none of which are within or adjacent to the Study Area. This species may occasionally fly over the Study Area, but it is unlikely to forage or nest there.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
ferruginous hawk *Buteo regalis*	BCC	Winter visitor. Frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys and fringes of pinyon-juniper habitats. Winters west of Cascades-Sierra Nevada.	**Unlikely.** Occasionally observed in Santa Clara Valley (eBird 2016). Potential foraging habitat is present, but this species does not nest in the region.	No further action recommended.
Swainson's hawk *Buteo swainsoni*	ST, BCC	Summer resident in California's Central Valley and limited portions of the southern California interior. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as agricultural fields, especially alfalfa. Preys on arthropods year-round as well as smaller vertebrates during the breeding season.	**Unlikely.** This species does not typically nest in the Santa Clara Valley, but was documented to nest 6.7 miles north of the Study Area in an agricultural area in 2013 (CDFW 2016a). The Study Area is within an area of suburban development, and the dearth of occurrences of this species in the region likely preclude presence in the Study Area beyond migratory movements.	No further action recommended.
northern harrier *Circus cyaneus*	SSC	Nests and forages in grassland habitats, usually in association with coastal salt and freshwater marshes. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. May also occur in alkali desert sinks.	**Unlikely**. Several documented sightings in Santa Clara Valley, although only one is in the vicinity of Morgan Hill (eBird 2011). No suitable dense marsh or shrub vegetation nesting habitat present in the Study Area, but potential foraging habitat is present.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
prairie falcon *Falco mexicanus*	BCC	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	**Unlikely**. Occasionally observed in Santa Clara Valley (eBird 2016). No suitable cliff nesting habitat present in the Study Area, but potential foraging habitat present north of West Dunne Avenue.	No further action recommended.
American peregrine falcon *Falco peregrinus anatum*	CFP, FD, SD, BCC	Prefers dry, open terrain, either level or hilly. Forages far afield, even to marshlands and ocean shores. Nests near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	**Unlikely**. Uncommonly observed in the Santa Clara Valley south of Coyote (eBird 2016). Although marginal foraging habitat is available within open portions of the Study Area and nesting is possible on the adjacent substation towers, the Study Area is located within an area of suburban development, and frequent human disturbance likely precludes nesting.	No further action recommended.
western snowy plover *Charadrius alexandrinus nivosus*	FT, SSC, BCC	Federal listing applies only to the Pacific coastal population. Found on sandy beaches, salt pond levees and shores of large alkali lakes. Requires sandy, gravelly or friable soils for nesting.	**No potential**. No suitable habitat in or near site.	No further action recommended.
long-billed curlew *Numenius americanus*	BCC	Breeds in upland shortgrass prairies and wet meadows in northeastern California. Habitats on gravelly soils and gently rolling terrain are favored over others	**No potential**. Fragmented habitat surrounded by urbanization likely precludes wintering flocks from Study Area.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
burrowing owl *Athene cunicularia*	BCC, SSC, SCVHP	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**Moderate Potential**. Although this species is not known to nest in the Morgan Hill area in recent years and no evidence of occupancy was observed during the site visit, suitable burrow habitat is available within the Study Area, and this species may at least winter within the Study Area (ICFI 2012). This species has been documented to occur approximately 0.5 mile south of the Study Area in 2002 (CDFW 2016a).	Pre-construction nesting bird surveys as described in Section 6.2.
short-eared owl *Asio flammeus*	SSC	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	**Unlikely**. There is no swamp or densely vegetated marsh or meadow habitat within the Study Area, and the fragmented habitat in a suburban landscape likely precludes presence.	No further action recommended.
long-eared owl *Asio otus*	SSC	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	**Unlikely**. There is no riparian habitat within the Study Area, and the fragmented habitat in a suburban landscape likely precludes presence.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Vaux's swift *Chaetura vauxi*	SSC	Redwood, Douglas-fir, and other coniferous forests. Nests in large hollow trees and snags. Often nests in flocks. Forages over most terrains and habitats but shows a preference for foraging over rivers and lakes.	**Unlikely**. No suitable coniferous forest nesting sites; may forage over the Study Area during migration.	No further action recommended.
black swift *Cypseloides niger*	BCC, SSC	Coastal belt of Santa Cruz and Monterey counties; central and southern Sierra Nevada; San Bernardino and San Jacinto Mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above surf; forages widely.	**Unlikely**. No suitable cliff or canyon nesting habitat; may rarely forage over the Study Area during migration.	No further action recommended.
rufous hummingbird *Selasphorus rufus*	BCC	Breeds in transition life zone of northwest coastal area from Oregon border to southern Sonoma county. Nests in berry tangles, shrubs, and conifers. Favors habitats rich in nectar-producing flowers.	**Unlikely**. Likely visits nearby nectar sources in landscaping during spring migration, but this species does not nest in region.	No further action recommended.
Allen's hummingbird *Selasphorus sasin*	BCC	Inhabits mixed evergreen, riparian woodlands, eucalyptus and cypress groves, oak woodlands, and coastal scrub during breeding season. Nest in shrubs and trees with dense vegetation.	**Unlikely**. This species typically nests in cooler summer climates associated with the fog belt, which is outside the Study Area, and there are few records of this species in the Santa Clara Valley south of San Jose (eBird 2016). This species may occur within the Study Area during migration, but it is unlikely to nest there.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Costa's hummingbird *Calypte costae*	BCC	Summer resident. Uses xeric habitats, especially California coastal scrub or sage scrub and dry open areas of chaparral in the coast ranges, and is occasionally found in oak savannah. Builds nest in shrub or tree living or dead, on branch, stem, or leaves, usually 1–2 m above ground.	**Unlikely.** Typical scrub or chaparral plant communities are not present in the Study Area, and this species has mostly been recorded in the hills of the Santa Clara Valley rather than the valley floor (eBird 2016).	No further action recommended.
Lewis' woodpecker *Melanerpes lewis*	BCC	Uncommon winter resident occurring on open oak savannahs, broken deciduous and coniferous habitats.	**Unlikely.** Typical open oak plant communities are not present in the Study Area, and this species has mostly been recorded in the hills of the Santa Clara Valley rather than the valley floor (eBird 2016).	No further action recommended.
Nuttall's woodpecker *Picoides nuttallii*	BCC	Relatively dense oak and riparian woods. Can also occur in urban and residential settings.	**High Potential.** This species was observed within the Study Area during WRA's initial assessment of the site in 2011.	Pre-construction nesting bird surveys as described in Section 6.2.
olive-sided flycatcher *Contopus cooperi*	SSC, BCC	Nesting habitats are mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir and lodgepole pine. Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain.	**Unlikely**. No suitable coniferous forest nesting habitat exists within the Study Area. May occur briefly during migration.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
willow flycatcher *Empidonax traillii*	SE, BCC	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2000 to 8000 foot elevation. Require dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches	**Unlikely.** No suitable dense riparian nesting habitat exists within the Study Area. This species does not nest in the region, but is frequently observed during migration. Thus, this species may occur in the Study Area briefly during migration, but it will not nest there.	No further action recommended.
loggerhead shrike *Lanius ludovicianus*	SSC, BCC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	**Moderate Potential.** This species can be found in suburban areas, and the Study Area contains suitable open grasslands for foraging and trees for nesting.	Pre-construction nesting bird surveys as described in Section 6.2.
least Bell's vireo *Vireo bellii pusillus*	FE, SE, BCC, SCVHP	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 feet. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, *Baccharis*, mesquite.	**No Potential.** The Study Area does not contain riparian habitat to support this species. Additionally, this subspecies has only been documented twice in Santa Clara County in recent years, in the southern part of the County near Gilroy in Llagas creek, 12 miles south of the Study Area (CDFW 2016a). This subspecies is usually found in southern California.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
bank swallow *Riparia riparia*	ST	Migrant in riparian and other lowland habitats in western California. Colonial nester in riparian areas with vertical cliffs and bands with fine-textured or fine-textured sandy soils near streams, rivers, lakes or the ocean.	**Unlikely.** The Study Area does not contain riparian areas to support nesting. This species may occasionally pass through the Study Area during migration.	No further action recommended.
oak titmouse *Baeolophus inornatus*	BCC	Oak woodland and savannah, open broad-leaved evergreen forests containing oaks, and riparian woodlands. Associated with oak and pine-oak woodland and arborescent chaparral.	**High Potential.** This species was observed within the Study Area during WRA's initial assessment of the site in 2011.	Pre-construction nesting bird surveys as described in Section 6.2.
yellow-billed magpie *Pica nuttalli*	BCC	Oak savanna with large trees and large expanses of open ground. The Central Valley floor, gentle slopes, and open park-like areas including along stream courses. Grasslands, pasture, or cultivated fields are needed for foraging.	**Moderate Potential.** This species can be found in suburban areas, and the Study Area contains suitable open grasslands for foraging and trees for nesting.	Pre-construction nesting bird surveys as described in Section 6.2.
yellow warbler *Dendroica petechia*	SSC, BCC	Frequents riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores and alders for nesting and foraging. Also nests in montane shrubbery in open conifer forests.	**Unlikely.** The Study Area does not contain riparian habitat to support nesting. This species may occasionally pass through the Study Area, but it is unlikely to nest there.	No further action recommended.
saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	SSC, BCC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**No Potential.** No suitable habitat in or near area, and the Study Area is outside this subspecies' range.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
yellow-breasted chat *Icteria virens*	SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forage and nest within 10 feet of ground.	**Unlikely.** The Study Area does not contain riparian habitat to support nesting. This species may occasionally pass through the Study Area, but it is unlikely to nest there.	No further action recommended.
grasshopper sparrow *Ammodramus savannarum*	SSC	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs, and scattered shrubs. Loosely colonial when nesting.	**Unlikely.** Although the Study Area contains some open grassland habitats, this species more typically inhabits the hills outside the Santa Clara Valley rather than the valley floor (eBird 2016). Additionally, frequent human disturbance, including a history of discing, preclude this species from nesting on the site. This species may occasionally forage or fly through the Study Area, but it is unlikely to nest there.	No further action recommended.
Bryant's savannah sparrow *Passerculus sandwichensis alaudinus*	SSC	Associated with the coastal fog belt, primarily between Humboldt and northern Monterey Counties. Occupies low tidally influenced habitats, adjacent to ruderal areas; often found where pickleweed communities merge into grassland. Infrequently found in drier grasslands.	**No Potential**. Morgan Hill is not within a summer fog belt, and the Study Area is thus outside this subspecies' range.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
black-chinned sparrow *Spizella atrogularis*	BCC	Prefers sloping ground in mixed chaparral, chamise-redshank chaparral, sagebrush, and similar brushy habitats. Often on arid, south-facing slopes with ceanothus, manzanita, sagebrush, and chamise.	**Unlikely**. This species is generally found in hills east and west of Morgan Hill (eBird 2016). May occur as a rare visitor, but the Study Area does not contain the chamise or chaparral habitats used by this species.	No further action recommended.
tricolored blackbird *Agelaius tricolor*	SC, BCC, SSC, SCVHP	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**Unlikely/Moderate Potential**. None of the aquatic areas within or adjacent to the Study Area, including the excavated stormwater basin in the northwest portion of the Study Area currently contain emergent vegetation to support nesting. In its current state, tricolored blackbird may occasionally occur within the Study Area to forage. However, historic aerials suggest that emergent vegetation has previously been present in the excavated stormwater basin (Google Earth 2016). If emergent vegetation grows within the basin, there is a moderate potential that this species may use this vegetation for nesting.	If emergent vegetation grows in the excavated stormwater basin, pre-construction nesting bird surveys as described in Section 6.2 are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
yellow-headed blackbird *Xanthocephalus xanthocephalus*	SSC	Summer resident. Breeds colonially in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. Requires abundant large insects such as dragonflies; nesting is timed for maximum emergence of insect prey.	**Unlikely.** This species is rare in the Santa Clara Valley (eBird 2016), and aquatic areas within the Study Area do not contain emergent vegetation to support nesting.	No further action recommended.
Lawrence's goldfinch *Spinus lawrencei*	BCC	Nests in open oak or other arid woodland and chaparral, near water. Nearby herbaceous habitats used for feeding. Closely associated with oaks.	**Unlikely**. This species is generally found in hills east and west of Morgan Hill (eBird 2016). May occur as a rare visitor, but the Study Area does not contain the woodland or chaparral habitats used by this species.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Reptiles and Amphibians				
California tiger salamander *Ambystoma californiense*	FT, ST, SCVHP	Inhabits grassland, oak woodland, ruderal and seasonal pool habitats. Seasonal ponds and vernal pools are crucial to breeding. Adults utilize mammal burrows as estivation habitat.	**Unlikely.** Wetlands and drainages within the Study Area are ephemeral in nature and are unlikely to hold water for the minimum 10 weeks needed to complete larval development in this species. Additionally, the nearest documented occurrence of this species is 0.8 mile south of the Study Area which is now considered extirpated (CDFW 2016a). Finally, the Study Area is located within an area of residential development that has been in place for over 20 years (Google Earth 2016), which limits viability as dispersal habitat.	No further action recommended.
foothill yellow-legged frog *Rana boylii*	SSC, SCVHP	Found in or near rocky streams in a variety of habitats. Prefers partly-shaded, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates.	**No Potential.** No suitable rocky stream habitat within or adjacent to the Study Area.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
California red-legged frog *Rana draytonii*	FT, SSC, SCVHP	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Must have access to moist areas if surface water disappears.	**Unlikely.** Wetlands and drainages within the Study Area are unvegetated and ephemeral in nature and are unlikely to hold water for the 11 weeks minimum needed to complete larval development in this species. Additionally, the nearest documented occurrence of this species is 2.5 miles west of the Study Area (CDFW 2016a). Finally, the Study Area is located within an area of residential development that has been in place for over 20 years (Google Earth 2016), which limits viability as dispersal habitat.	No further action recommended.
western pond turtle *Actinemys marmorata*	SSC, SCVHP	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	**Unlikely.** Aquatic environments within or adjacent to the Study Area are either fenced or ephemeral, preventing this species from inhabiting them. The Study Area is also situated within and area of residential development that effectively disconnects the Study Area from more open, undisturbed habitats where this species may occur.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Blainville's (coast) horned lizard *Phrynosoma blainvillii (coronatum)*	SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	**Unlikely.** The Study Area is situated within and area of residential development disconnected from other populations in the region and is a highly disturbed area with a history of repeated disking.	No further action recommended.
Fishes				
steelhead - south/central CA coast DPS *Oncorhynchus mykiss irideus*	FT, SSC	Occurs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**No Potential.** The Study Area does not contain, nor is connected to any suitable streams that steelhead may access.	No further action recommended.
steelhead - central CA coast DPS *Oncorhynchus mykiss irideus*	FT, NMFS	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**No Potential.** The Study Area does not contain, nor is connected to any suitable streams that steelhead may access.	No further action recommended.
Invertebrates				
monarch butterfly *Danaus plexippus*	SSI	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby.	**No Potential.** No suitable sheltered roosting habitat in or adjacent to the Study Area.	No further action recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Bay checkerspot butterfly *Euphydryas editha bayensis*	FT, SSI, SCVHP	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants.	**No Potential.** No suitable serpentine soil habitat in or adjacent to the Study Area.	No further action recommended.

*** Key to status codes:**

BCC	USFWS Birds of Conservation Concern
CFP	CDFW Fully Protected Animal
EPA	Eagle Protection Act Species
FD	Federal Delisted
FE	Federal Endangered
FT	Federal Threatened
NMFS	Species under the Jurisdiction of the NMFS
SCVHCP	Santa Clara Valley Habitat Plan Covered Species
SC	Candidate for State Listing
SD	State Delisted
SE	State Endangered
ST	State Threatened
SSC	CDFW Species of Special Concern
SSI	CDFW Special-Status Invertebrate
WBWG	Western Bat Working Group (High or Medium) Priority species
Rank 1A	CRPR Rank 1A: Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	CRPR Rank 1B: Plants rare, threatened or endangered in California and elsewhere
Rank 2B	CRPR Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3	CRPR Rank 3: Plants about which CNPS needs more information (a review list)

Species Evaluations:
See evaluation definitions in Section 3.2.2 of the report.

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APPENDIX C

SITE PHOTOGRAPHS

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Photograph 1. Representative non-native annual grassland within the Study Area, dominated by wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), yellow star thistle (*Centaurea solstitialis*),.

Photograph 2. Representative non-native annual grassland, with emergent trees and shrubs including coast live oak (*Quercus agrifolia* var. *agrifolia*), and coyote brush (*Baccharis pilularis* ssp. *consanguinea*).

Photograph 3. Potentially jurisdictional seasonal wetland at the base of a former stormwater retention basin in the southern portion of the Study Area. Vegetation is dominated by arroyo willow (*Salix lasiolepis*), and spiny rush (*Juncus acutus*).

Photograph 4. Potentially jurisdictional seasonal wetland in the southern portion of the Study Area, approximately 200 feet south of West Dunne Avenue. Vegetation is dominated by barley (*Hordeum marinum* ssp. *gussoneanum*), curly dock (*Rumex crispus*), and rush (*Juncus* sp.).

Photograph 5. Intermittent stream (Llagas Creek) in the northeast corner of the Study Area.

Photograph 6. Potentially jurisdictional drainage ditch in the northwest portion of the Study Area.